

Exhibit 67-B

**Redacted Version of
Document Sought to be Sealed**

INVESTIGATIVE MEMORANDUM: App Developer Background

TO:	Gibson Dunn & Crutcher LLP
FROM:	Stroz Friedberg
DATE:	February 21, 2019
RE:	1. Wisdom (155202421210030) 2. Alert (155018221207734) 3. Emma, the Friendly Marketplace (100158893401448) 4. LoicFBApp (153729021352139) 5. Usher for Managing Events (238063252871825) 6. Wisdom – Internal Test (184999731582487)
APP TYPE:	Apps by developer of software for data analysis

Table of Contents

Key to Abbreviated App Names4

Key Points4

 Permissions that require use case validation:8

Executive Summary10

 Alert10

 Background Summary10

 Permissions and API Calls Analysis11

 API Call Analysis11

 Emma, the Friendly Marketplace (“Emma”)15

 Background Summary15

 Permissions and API Calls Analysis:15

 LoicFBApp (“Loic”)18

 Background Summary18

 Permissions and API Calls Analysis:18

 Usher for Managing Events (“Usher”)21

 Background Summary21

 Permissions and API Calls Analysis:21

 Wisdom24

 Background Summary24

 Wisdom – Internal Test App (“WIT”)28

Targeted RFI Questions30

1 Background Information from Facebook32

 Alert32

 Emma40

Privileged and Confidential – A/C Privileged – Attorney Work Product

Loic.....	45
Usher.....	51
Wisdom.....	58
WIT.....	63
2 App Developer's Statements about Data Usage & Privacy Policy	65
CEO's Statements about Data Collection.....	65
Company Statement about Data Security	66
Supplementary Wisdom Privacy Statement.....	67
Microstrategy Privacy Policies	68
Wisdom Privacy Policy Dating from 2012.....	68
Microstrategy Current Policy.....	73
Additional Privacy Policies	74
3 App Business Information	75
Microstrategy	75
Partnership with Facebook.....	76
Alert.....	77
Second Alert app	78
Facebook Enforcement against Alert	78
Emma	79
Loic	80
Usher	80
Wisdom	82
Wisdom Professional.....	91
Wisdom and Gateway for Facebook	92
Fate of Wisdom apps.....	93
WIT	95
Management	95
Parent Entity	97
Domain Registration Information.....	97
Alert.....	98
Emma	100
Loic	101
Usher	101
Wisdom and WIT	102
Provided Email Addresses.....	105
Additional Contact Information.....	107
4 Corporate Registry Information.....	108
5 Media/Internet Research	109
Microstrategy	109
Financial mismanagement claims.....	109
Alert	110
Emma.....	110
Loic.....	111
Usher.....	111
Wisdom.....	111
Data-collection capabilities	111
Benefits for electoral polling	112

Privileged and Confidential – A/C Privileged – Attorney Work Product

Academic study using Wisdom Professional113

WIT113

6 Adverse Records.....113

Criminal Records113

Civil Records.....113

Bankruptcies, Judgments and Liens114

Appendices115

Appendix A – Microstrategy Privacy Policy115

Appendix B – Alert Privacy Policy122

Appendix C – Alert Terms of Use127

Appendix D – Emma, the Friendly Marketplace Privacy Policy135

Appendix E – Usher for Managing Events Privacy Policy140

Appendix F - Wisdom Privacy Policy 2011145

Appendix G - Wisdom privacy policy, as captured in 2012.....150

Appendix H - Wisdom Privacy Policy 2012155

Appendix I - Privacy Policy URLs160

Appendix J - Terms of Service URLs161

Appendix K - Domain Registration Information URLs162

Appendix L - Developer Email Addresses.....163

Appendix M – “Scholars Have Data on millions of Facebook Users. Who’s Guarding It?”164

Appendix N – List of Facebook apps associated with Microstrategy emails167

Appendix O – App Earliest API Version and Priority191

Key to Abbreviated App Names

Because some apps have long names, this report uses the abbreviations below:

Original app name	App ID	Abbreviated version
Alert	155018221207734	Alert
Emma, The Friendly Marketplace	100158893401448	Emma
LoicFBApp	153729021352139	Loic
Usher for Managing Events	238063252871825	Usher
Wisdom	155202421210030	Wisdom
Wisdom – Internal Test	184999731582487	WIT

Key Points

Subject Apps Accessed Graph API v1. In 2010 and 2011, Microstrategy Inc. (“Microstrategy”) developed the six subject apps:

1. Wisdom
2. Alert
3. Emma the Friendly Marketplace
4. LoicFBApp
5. Usher for Managing Events
6. Wisdom-Internal Test App.

All six of these apps are “active” on Facebook’s Platform, but none has active users. These apps requested permissions to data and accessed Facebook’s Graph API v1. Notably, the apps that were made publicly available appear to have been dropped

from Microstrategy's official service line after 2012, although they continued to make API requests after this time.¹

Other Microstrategy Apps. Facebook records show over 200 additional Facebook apps that appear to be developed by Microstrategy. A full list of these apps is in **Appendix N**. Further examination of these apps can be conducted upon request.

Background on Company.

- Microstrategy is a business-software developer founded in 1989 and headquartered in Tysons Corner, Virginia.² The company was co-founded by Michael J Saylor, who currently serves as its Chairman and CEO, and Sanju Bansal, who resigned in 2013.³ The business employs over 2,000 people and is publicly traded on the NASDAQ stock exchange.⁴
- Microstrategy develops analytics platforms for businesses. These are offered through license arrangements and cloud-based subscriptions.⁵ The company describes itself in corporate literature as providing "powerful software solutions and expert services that empower every individual with actionable intelligence."
- In 2011, Microstrategy launched Wisdom, which was marketed to individuals as a tool for analyzing and managing information on Facebook. Microstrategy later developed a Wisdom product for business – Wisdom Professional – to perform market and customer analysis.

Partnership with Facebook. Executive officers of Microstrategy have described having a commercial relationship with Facebook for several years, and in one instance claimed their collaboration was showcased in the Wisdom app. In 2012, CEO Michael Saylor reportedly told one media source that Wisdom "gives you a window into the Facebook universe," adding that Wisdom was gathering Facebook data, and contributing to a "Wisdom network" of more than 4 million people.⁶

Media Cites Data Capabilities of Wisdom. A number of media sources reference Wisdom and Wisdom Professional's data-collection capabilities, highlighting the apps' access to large volumes of user and user friend data. Recent reports published since the Cambridge Analytica events have raised concern about the extent of these

1 <https://ir.microstrategy.com/static-files/31ac9c8c-adea-42b2-aeb2-c7e3c17c34c4>

2 <https://www.linkedin.com/company/Microstrategy/about/>

3 <https://ir.Microstrategy.com/corporate-governance/board-of-directors>

<https://www.bizjournals.com/washington/blog/techflash/2013/11/Microstrategy-co-founder-sanju-k.html>

4 <https://markets.ft.com/data/equities/tearsheet/summary?s=MSTR:NSQ>

<https://www.owler.com/company/Microstrategy>

5 <https://www.reuters.com/finance/stocks/companyProfile/MSTR.O>

6 "Microstrategy bets big on Facebook data," Gigaom.com January 25, 2012

<https://gigaom.com/2012/01/25/Microstrategy-bets-big-on-facebook-data/>

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accesses. Several news reports reference organizations accessing data about tens of millions of people via Wisdom or Wisdom Professional.

- In November 2012, *Tulsa World* reported that the Business Marketing department of the Oklahoma State University Spears School was able to access data of approximately **16 million** people from Wisdom Professional.⁷
- Also in November 2012, *Washington Post* reported that Wisdom could be utilized by pollsters as part of the US general election. The article highlighted the app's ability to conduct instant polls and reported that it had a user base of approximately **16 million users** from which it could gather data about voter preferences. The article contains no allegations of wrongdoing in relation to the electoral process.
- In April 2013, *The Island Packet* reported that students at the University of South Carolina Beaufort had used Wisdom to view aggregated data from approximately **20 million** Facebook users to help develop a tourism marketing plan for Bluffton in South Carolina.⁸
- Similarly, in May 2013, Petter Bae Brandtzaeg, an associate professor at the University of Oslo and Chief Scientist at SINTEF, one of Europe's largest independent research organizations, claimed that Wisdom had granted him access to data from over **20 million** people to support his studies.⁹
- In March 2018, tech news website *The Verge* published an article entitled "The shady data-gathering tactics used by Cambridge Analytica were an open secret to online marketers. I know because I was one." In it, Alexandra Samuel, the former Vice President of Social Media for customer-intelligence-software company Vision Critical, claimed that Microstrategy's employees told her that Wisdom could access data from **17.5 million people**, even though the app itself had only been installed by approximately 50,000 users.¹⁰

Wisdom Privacy Policy Raises Concerns about How Microstrategy Managed Data Access. A privacy policy associated with Wisdom raises several concerns regarding Microstrategy's practices with respect to access, collection, and use of Facebook user data. A 2012 policy for Wisdom states that Microstrategy collects Facebook user data, offers an intelligence service, and sells features to the service. One excerpt from the policy explains how they would even collect user *friends'* data: "Even if you have not explicitly allowed us access to any of your Facebook Information, we may collect

⁷ Tulsa World, "Facebook used for political sampling", November 5, 2012

⁸ "USCB students mine Facebook to get traveler to 'like' Bluffton," The Island Packet, April 1, 2013.

⁹ <https://www.sciencedaily.com/releases/2013/05/130522085217.htm>

¹⁰ <https://www.theverge.com/2018/3/25/17161726/facebook-cambridge-analytica-data-online-marketers>

information about you when your friends on Facebook allow access to and use the Wisdom Service, subject to your Facebook settings.”

Permission and API Call Analysis – Overview.

- **Many sensitive and friends permissions.** The apps referenced in this report had collected vast quantities of highly sensitive user and friends permissions. Since the apps’ reported use cases varied from data analytics to transaction verification and event management, it is uncommon to see 5 of the 6 apps referenced herein requesting similarly large quantities of sensitive permissions — some of which do not appear to have valid use cases.
- **Wisdom app’s use case (Facebook analytics) and massive API volume.** Of particular note is the Wisdom app, which was primarily **used to perform analytics on Facebook user data**. With such a use case, any and all sensitive data types could be within the scope of collection. But this does not guarantee that all data collected was used to improve the user experience — especially for (1) friends of app users and (2) users who did not purchase the paid version of the app (Wisdom Professional). The app was observed making roughly **74 million API calls per month** — a volume few apps achieve, even over years of operation. External media sources show that the data collected by the entities described in this report was known to be highly valuable — with many parallels drawn between the data collected by these entities and that of Cambridge Analytica.
- **LoicFBApp and millions of API calls.** Another interesting app was LoicFBApp, which appears to be a test version of the Wisdom app, and was only installed by roughly 400 users, while making millions of API calls throughout its lifecycle. It is likely that this app served as a means of collecting additional data points not handled by Wisdom, and warrants an RFI.

For these reasons, an RFI is recommended — to establish how this data was used and shared.

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Permissions that require use case validation:

For **Alert** (155018221207734), **LoicFBApp** (153729021352139), **Wisdom** (155202421210030), and **Usher for Managing Events** (238063252871825):

- | | |
|--------------------------------|-----------------------------|
| • export_stream | • share_item |
| • friends_about_me | • user_about_me |
| • friends_activities | • user_activities |
| • friends_birthday | • user_birthday |
| • friends_checkins | • user_checkins |
| • friends_education_history | • user_education_history |
| • friends_events | • user_events |
| • friends_groups | • user_friends |
| • friends_hometown | • user_groups |
| • friends_interests | • user_hometown |
| • friends_likes | • user_interests |
| • friends_location | • user_likes |
| • friends_photos | • user_location |
| • friends_relationship_details | • user_managed_groups |
| • friends_relationships | • user_notes |
| • friends_religion_politics | • user_photos |
| • friends_status | • user_posts |
| • friends_videos | • user_relationship_details |
| • friends_website | • user_relationships |
| • friends_work_history | • user_religion_politics |
| • manage_friendlists | • user_status |
| • offline_access | • user_videos |
| • read_insights | • user_website |
| • read_stream | • user_work_history |

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For **Alert** (155018221207734), **LoicFBApp** (153729021352139), and **Wisdom** (155202421210030):

- friends_notes
- friends_online_presence
- friends_photo_video_tags
- user_online_presence
- user_photo_video_tags

For **LoicFBApp** (153729021352139):

- offline_access
- read_mailbox
- read_requests
- user_games_activity

For **Alert** (155018221207734):

- offline_access
- read_mailbox
- read_requests

Fate of Wisdom Unclear. By 2014, in Microstrategy's references to Wisdom in public statements began to diminish, and the company's SEC filings no longer identify Wisdom as a business offering.¹¹ The fate of the product is unclear. One concern relating to the winding down of the Wisdom business is how data gathered by the app was subsequently used. Research was unable to provide a conclusive answer; we recommend seeking answers through the RFI process.

Academic Risk Category. The Wisdom app was identified as part of the Academics Risk Category because Petter Bae Brandtzaeg, an associate professor at the University of Oslo and Chief Scientist at SINTEF used Wisdom to study Facebook data, including a

¹¹ Microstrategy's Form 10-K for 2012 filed on February 13, 2013 references the Wisdom products at length. But Microstrategy's Form 10-K for 2013 filed on February 12, 2014 no longer references the Wisdom suite of products.

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study of gender involving 21 million Facebook likes, “Facebook is no ‘Great Equalizer’ A big data approach to gender differences in civic engagement across countries.”

Executive Summary

Alert

Developer Name: Diego Valenzuela (Microstrategy)

Reason for Escalation: Academic - Risk Prioritization App

App Status: Active

Preliminary Recommendation: RFI

Reason for Preliminary Recommendation: This app integrates with a user’s profile. It was granted a large number of permissions under Graph API v1, to access sensitive data. Although its permissions appear to fall within scope for Alert, because the app made a high number requests and likely had access to a vast amount of user and friend information, further details should be sought through RFI regarding how this data was managed and to establish if it was shared with any third parties.

- This app has 225,845 total authenticated users and 0 active users.
- This app requested many sensitive permissions under Graph API v1

Background Summary

App Description: This app was created on November 11, 2010. This app is a mobile platform focused on loyalty and customer engagement, tailored primarily to retail customers

Graph version: v1

Special Relationship with Facebook: See Wisdom

Additional information: None identified

Additional Contact Information: None identified

Key Dates:

- November 11, 2010 - App created
- May 24, 2011 - App disabled by Facebook

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Permissions and API Calls Analysis

Alert has approximately 226,000 total authenticated users and 0 active users.

Under Graph API v1, the app was granted access to information that included user-generated content (likes, activities, about-me sections) as well as information concerning work history, religion, politics, and education. Alert presented information from users' Facebook profiles according to their preferences, and so these permissions appear to fall within the app use case, as they could be used to tailor the content.

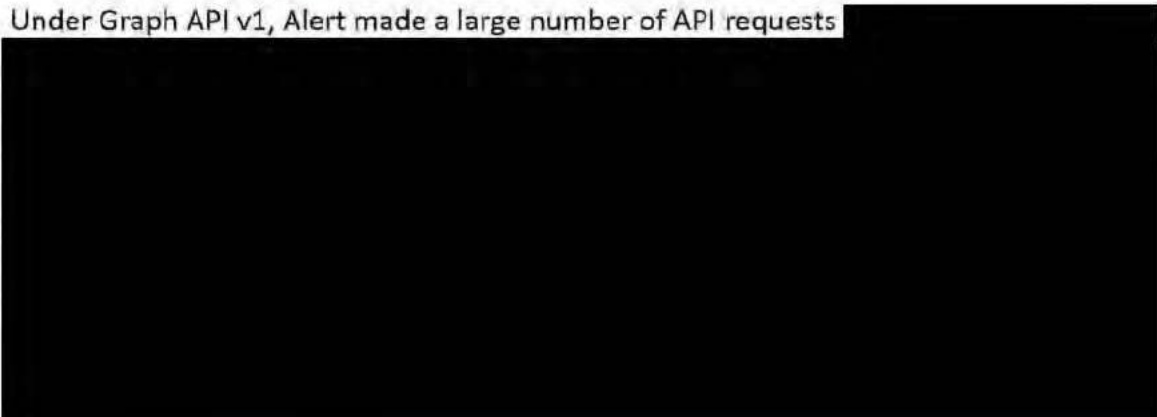
Notably, approximately 184,000 users also granted Alert access to the user_friends permission, which allowed access to the user IDs of users' friends. Again, this permission appears to fall within the use case, as it would be needed to prioritize information appearing in users' feeds. Roughly 33,000 users granted the highly sensitive read_stream permission to the app, which allowed it to read content posted to user pages – including content generated by other users who did not install the app. This permission appears to be outside the app's use case.

Alert also requested several lower-sensitivity permissions. These allowed the app to access information about locations, relationships, and birthdays — of both users and their friends. This information is considered less sensitive, as it could be obtained from other sources. Based on the app use case, these permissions appear to be in scope for the same reasons stated above.

Post-Graph API v1, Alert was granted approximately 38,000 email and contact_email permissions, and approximately 16,000 user_friends permissions. Permissions relating to email appear to fall within the app's use case, as emails are often used for registration. Post-Graph API v1, the user_friends permission only returned a list of friends who already registered with the app. Additionally, friends permissions were removed, meaning that user permissions were the only means for accessing sensitive user information, limiting the pool of potentially affected users to those already using the app. These permissions still appear to align with the app's use case, since collecting information from user friends could be required to tailor content.

API Call Analysis

Under Graph API v1, Alert made a large number of API requests



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Alert also made a series of more targeted requests to other edges of the User node as well as the Event, Page, Photo, Post and Application nodes and edges. The app's high number of requests indicates that it was actively collecting user information. **Although these appear to fall within scope for Alert, because the app made a very high number of requests — and likely had access to a vast amount of user and friend information — an RFI should seek to learn how this data was managed, establishing if it was shared with any third parties.**

Post-Graph API v1, Alert made fewer requests, but still made calls in substantial numbers. Although the permissions activity post-Graph API v1 may appear to indicate that the app had access to fewer permissions during this time, any permissions granted under v1 would carry over to v2 and above — if the permission was still valid.

[REDACTED]

Based on the permissions likely carried over from v1 — and even the permissions granted post-v1 — it is possible that Alert retrieved sensitive user information under v2 of the Graph API and greater.

Other high-volume requests made during this time that may have accessed user information include:

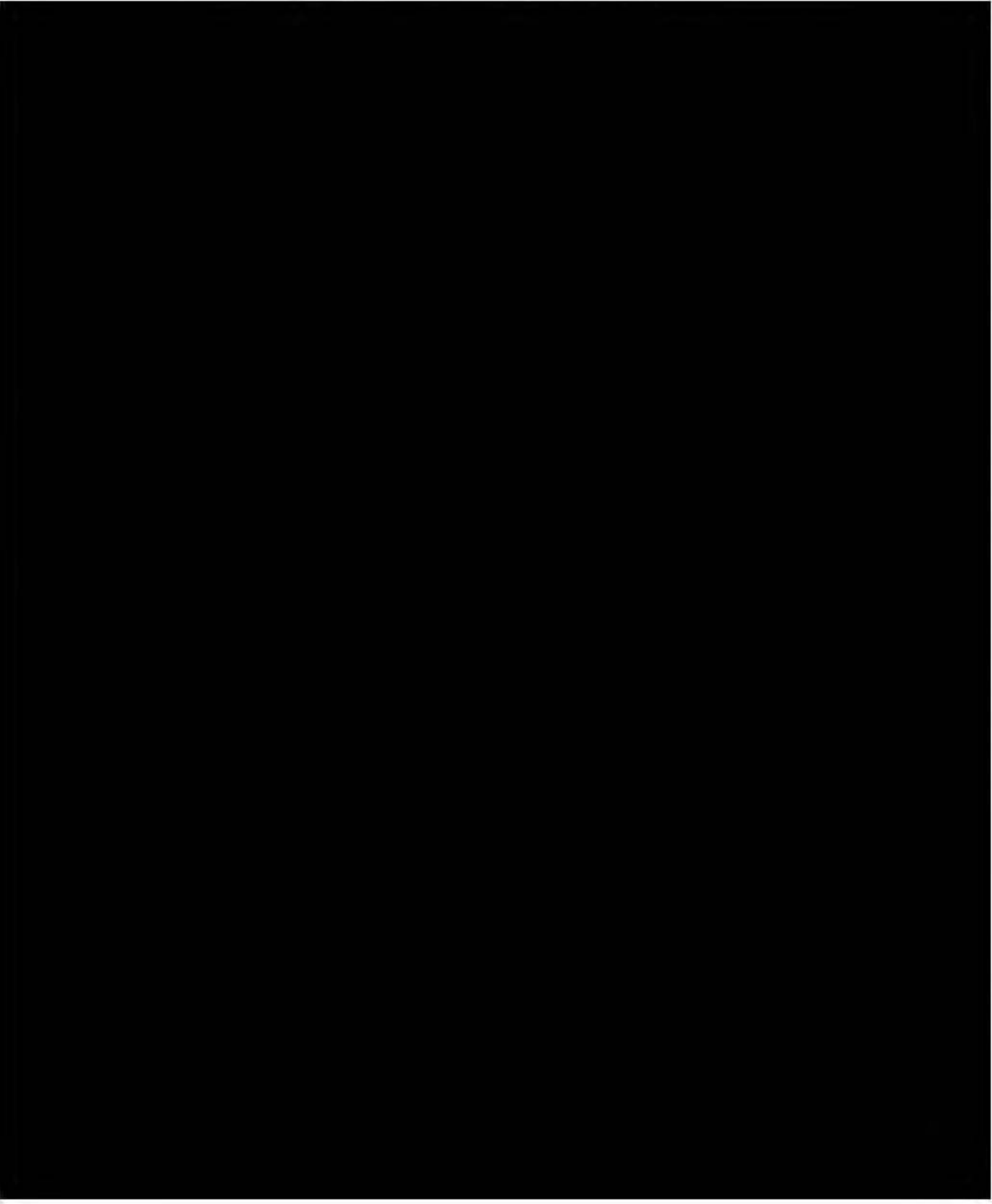
1. gr:get:Photo
2. gr:get:Video
3. gr:get:Album/picture
4. gr:get:User/og.likes

Once again, this likely aligned with the app's functionality, although further information should be requested from the developers regarding its treatment and usage with regard to third parties.

Permissions Granted by Number of Users – v1



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Emma, the Friendly Marketplace (“Emma”)

Developer Name: Hung Le (Microstrategy Inc.)

Reason for Escalation: Academics - Risk Prioritization App

App Status: Active

Preliminary Recommendation: RFI

Reason for Preliminary Recommendation: The app has access to a significant number of sensitive permissions under Graph API v1.

Background Summary

App Description: The app is a marketplace/lifestyle app that works like Ebay or Craigslist. The app allows users to learn information about the buyer via their Facebook page. The app was created by Microstrategy Inc. subsidiary Strategy Incorporated Network on March 18, 2011.

Graph version: v1

Special Relationship with Facebook: See Wisdom

Additional information: N/A

Additional Contact Information: N/A

Permissions and API Calls Analysis:

Emma has 8,212 total authenticated users and 0 active users.

The permissions granted to Emma under Graph API v1 largely appear to relate to the app’s functionality of providing classified listings. For example, permissions such as user_photos and user_about_me were likely used to provide background information about parties involved for purposes of transparency. But other permissions such as those that granted access to user-generated content (notes and statuses), work history, relationships, political views and education, serve a less obvious function in relation to the app. The majority of the aforementioned permissions were granted by approximately 8,000 users.

Emma also granted permissions that allowed access to data considered less sensitive under Graph API v1. These permissions, also issued by approximately 8,000 users, included information about users’ location, and birthday. They are considered less of a concern as they could be obtained from other sources. User_location would likely have been used to help coordinate transactions; but the user_birthday permission appears unrelated to the purpose of the app. A total of 59 users granted the highly sensitive read_stream permission to the app, which allowed it to read content posted to user pages – including content generated by other users who did not install the app. This permission appears to be outside the app’s use case.

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The first logged API activity for Emma occurred in November 2011 and continued through until May 2015, notably ceasing only two days before the last date that Graph API v1 was available. [REDACTED]

[REDACTED] The app made several API requests to various edges on the User node that gathered information about users' interests (User/albums - approximately 570,000 calls; User/likes - approximately 1 million calls; User/interests - approximately 1.4 million calls). [REDACTED]

[REDACTED] There was a significant decrease in API call activity from June 2013 forward, which is likely due to a decrease in users engaging with the app over time, although this could not be confirmed.

During the time period after Graph API v1 was deprecated, the app only made six data retrieval calls — each directly to the User node. These queries are limited to the data granted through the aforementioned permissions, and may therefore have included sensitive information.

Permissions Granted by Number of Users – v1



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LoicFBApp (“Loic”)**App Name:** LoicFBApp**Developer Name:** Loic Fabro (Microstrategy, Inc)**Reason for Escalation:** Academic - Risk Prioritization App**App Status:** Active**Preliminary Recommendation:** RFI

Reason for Preliminary Recommendation: This app integrates with a user’s profile and was granted a large number of sensitive permissions under Graph API v1. While there are indications that the app may have been a test environment, we recommend asking the developer how the app was used — in the context of such large call numbers.

Background Summary

App Description: This app was created February 23, 2011. This app pools user data to provide insights to its users, allowing them to discover trends and get more information from Facebook. The app developer is Loic Fabro who also developed the Wisdom app, and this app may have been used as a test environment for Wisdom.

Graph version: v1

Special Relationship with Facebook: Shielded-Ads-Management-Capabilities Protection. In addition, see “Special Relationship with Facebook” in the Background Summary section of Wisdom.

Additional information: None Identified**Additional Contact Information:** None Identified**Permissions and API Calls Analysis:**

Loic has 360 total authenticated users and 0 active users.

The app was granted permissions that allowed it access to sensitive user data under Graph API v1, including user-generated content (notes, likes, photos, videos, and statuses) as well as information about work history, religion, politics and education. Given the app’s apparent function as a test environment for the Wisdom app (see subsequent sections) which is required to modify nearly all of the information available on a user’s Facebook profile, it is likely that these permissions, while extensive, do fall within the app’s use case.

Loic was also granted several lower-sensitivity permissions, which would have allowed it access to information about the locations, relationships and birthdays of users and their friends. This information is considered less sensitive, as it could be obtained from other sources. Similarly, based on the understood this app’s use case, these permissions also appear to be in scope. Roughly 340 users granted the highly sensitive read_stream permission to the app, which allowed it to read content posted to user

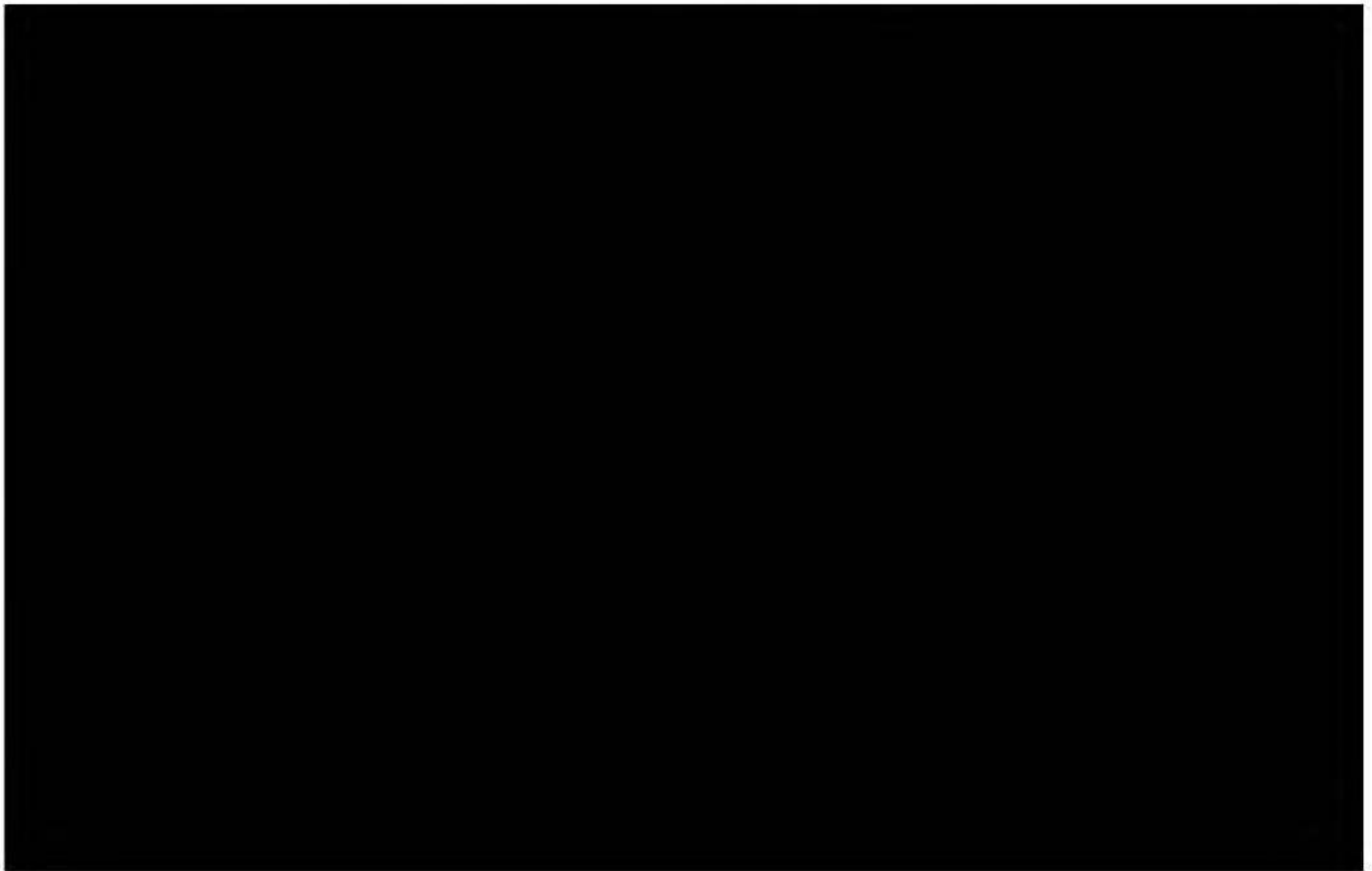
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pages — including content generated by other users who did not install the app. This permission appears to be within the app's use case, as a trend-analysis data point.



Based on the high number of user and friends permissions, it is likely that these requests returned highly sensitive user information. LoicFBApp also made a number of more targeted requests to other edges of the User node and the following nodes, along with their related edges: Edge node, Page node, AdAccount node, Post node, Group node and FriendsList node. The high number of requests suggests that the app collected extensive amounts of data on the app's users — and, potentially, their friends. It is likely that this app served as a means of collecting additional data points for the Wisdom app. **Further questions should be asked of the developer to confirm exactly how the test app was used, in the context of such large call numbers.**

Permissions Granted by Number of Users – v1



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Usher for Managing Events (“Usher”)**App Name:** Usher for Managing Events**Developer Name:** Hector Vazquez (Microstrategy Inc)**Reason for Escalation:** Academics - Risk Prioritization App**App Status:** Active**Preliminary Recommendation:** RFI

Reason for Preliminary Recommendation: Usher has access to a large number of sensitive permissions under Graph API v1. Additionally, the app was disabled on August 25, 2011, but never deleted. It is still listed as “active,” and the website connected with the app is no longer accessible.

Background Summary

App Description: Usher for Managing Events is likely an app that was used to manage events. The website associated with the app “cannot be reached”, and limited information regarding the app was found. The app is associated with Microstrategy Inc, and created on June 30, 2011.

Graph version: v1**Special Relationship with Facebook:** See Wisdom**Additional information:** N/A**Additional Contact Information:** N/A**Key Dates:**

- The app was created on June 30, 2011
- The app was disabled on August 25, 2011 by “computer” for “Events Generic”
- The app was moved to development mode on April 2, 2014

Permissions and API Calls Analysis:

Usher for Managing Events has 4,828 authenticated users, and 0 active users.

The app was only granted permissions under Graph API v1. Many of the permissions allowed access to users and friend-generated content (notes and statuses), work history, politics and education. Only some of these permissions relate to the app’s apparent functionality of managing users’ events — for example, permissions such as user_events, user_interests, and user_activities would provide information on types of event that users might be interested in as well as those that users attended. Most of the aforementioned permissions were granted by approximately 4,000 users.

Usher was also granted permissions to access data that is considered less sensitive under Graph API v1. These permissions included information about the locations,

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relationships, and birthdays of users and their friends. These are considered less sensitive as they could be obtained from other sources. The user_location permission is consistent with the app's use case, as this could identify nearby events for users. These permissions were again granted by approximately 4,000 users. The purpose of the friends_relationships and friends_birthday permissions are less obvious, however. Because these permissions were granted under Graph API v1, the scope of API requests made has the potential to reach all of a user's friends. Roughly 3,800 users granted the highly sensitive read_stream permission to the app, which allowed it to read content posted to user pages — including content generated by other users who did not install the app. This permission appears to be outside the use case of an event-management app.

Usher made many API requests related to various edges on the User node that would have collected information about users' interests, including User/feed (approximately 1500 calls), User/photos (approximately 200 calls) and User/interests (approximately 45,000 calls). The app made a total of approximately 120 million API requests related to the User node under Graph API v1, including calls using the gr:get:User, gr:get:friends, gr:get:User/events and gr:get:User/groups methods.

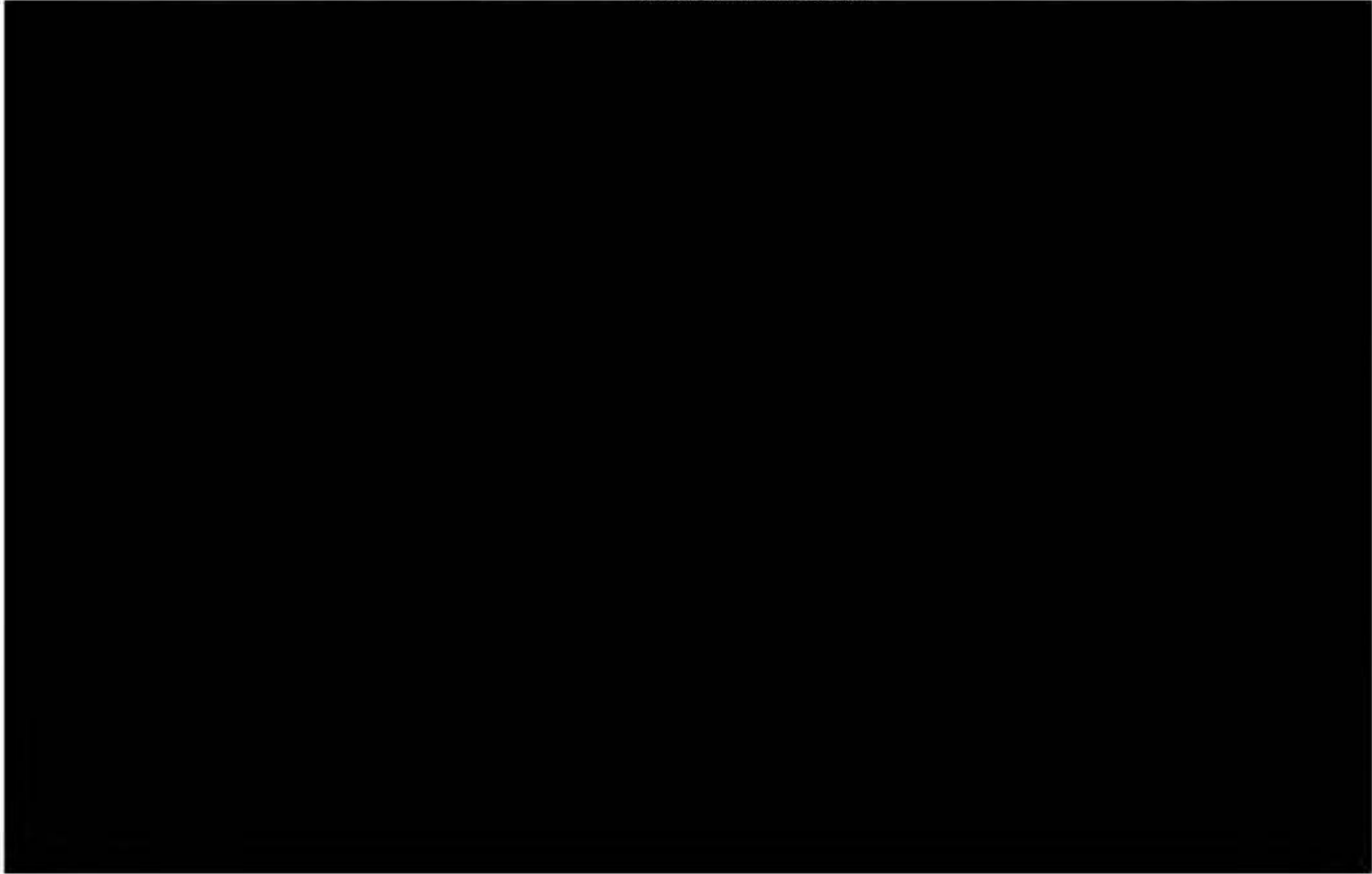
There was a significant decrease in API call activity from April 2014, post-Graph API v1. This is likely due to a decrease in users engaging with the app over time, although this could be confirmed. As expected for an app that manages events, a significant number of API requests — approximately 130 million — were made related to edges on the Event node

[REDACTED]

[REDACTED]

[REDACTED] these queries are limited to the data granted through the aforementioned permissions, which would have allowed access to methods such as user_religion_politics, and may have included sensitive information. No permissions were granted to the app post-v1.

Permissions Granted by Number of Users – v1



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Wisdom

App Name: Wisdom

Developer Name: Loic Fabro (Microstrategy Inc.)

Reason for Escalation: Academic - Risk Prioritization App

App Status: Active

Preliminary Recommendation: RFI and On-site Audit

Reason for Preliminary Recommendation: Wisdom has been granted permissions under Graph API v1 which contain data that is highly sensitive by its user population of roughly 65,000 users. The company which developed the application, Microstrategy Inc., sells various products relating to data systems and data analytics. It is worth investigating why this sensitive data was collected, who has currently and historically been responsible for this data, whether this data was properly anonymized, identify the third parties who obtained this data, and determine the purpose for any third party data transfer. In addition, it appears that Wisdom and the other subject apps are no longer being actively used, and we recommend determining what happened to the large set of data collected by the app.

- The app had access to a large number of highly sensitive permissions for over 65,000 users under Graph API version 1.
- The app has 67,137 authenticated users and 0 active users.
- The app is in development mode.

Background Summary

App Description: Wisdom was created on April 15, 2011 by Microstrategy Inc., a company based in McLean, Virginia. The app allows users to join the “Wisdom network” and can perform several functions such as filtering news feeds, providing recommendations for activities and food, and analyzing connected friends’ Facebook activity.

Graph version: v1

Special Relationship with Facebook: Open-source research indicates Microstrategy and Facebook had a commercial relationship dating from 2012 and continuing through 2016.

- **In 2012, Microstrategy CEO Sanju K. Bansal told a business magazine that Facebook was a customer.** Bansal was quoted as saying:

“Facebook is a customer of Microstrategy, so we do have a good commercial relationship with them, we work with them. We had their CIO speak and keynote our user conference last year in the summer. ... More importantly, the public manifestation of the work we’ve done can be found on **Wisdom.com**. That’s our application where we pull data from Facebook, we pull fan preferences, fan demographics, fan psychographics. If you

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wanted to find out anything about anything - you wanted to do a quick survey or a quick poll about what people like and what they're behavior might be, what age groups like certain things, you can do that very quickly by going to Wisdom.com. **In this case, what we've done instead of trying to build enterprise technology first, we've created a consumer-facing technology using Facebook data, in order to give people a general knowledge app.** It just tells you a lot about a lot."¹²

- **In addition, Microstrategy appears to have partnered with Facebook in recent years to develop business-intelligence solutions.** A YouTube video published in September 2013 shows a presentation given by Guy Bayes, Facebook's Head of Enterprise BI, in which he discussed how Microstrategy had developed software capable of presenting information about Facebook's 1 billion+ user base.¹³
- **Microstrategy claims that Facebook is a customer that used the Microstrategy Analytics Platform,** which "enables organizations to analyze vast amounts of data and distribute actionable business insight throughout an enterprise."¹⁴
- **In June 2017, Microstrategy published announcements that the company partnered with Facebook** the previous year on a "Big Data Analytics" project.¹⁵ Facebook reportedly engaged Microstrategy "to create and test a new massively-parallel in-memory analytic technology" named EMMA (shortened from Extended MPP Memory Architecture). The software was described as able to analyze just over half of the Facebook dataset in under five seconds.¹⁶

Additional information: N/A

Additional Contact Information: The primary email used for general inquiries at Microstrategy is info@Microstrategy.com.

Key Dates:

- App created on April 15, 2011.
- App disabled on April 18, 2011 by Niket Biswas for "Extended Perm, Async."
- It is unclear when this application was re-enabled.
- App moved to development mode on April 30, 2015.

¹² "The B-side of the Sanju K. Bansal interview," Washington Business Journal, March 23, 2012.

¹³ <https://www.youtube.com/watch?v=vvMNYSo5wO0>

¹⁴ Microstrategy Form 10-K for 2013 filed on February 12, 2014.

<https://www.sec.gov/Archives/edgar/data/1050446/000119312514048295/d639132d10k.htm>

¹⁵ https://community.Microstrategy.com/s/article/Facebook-and-Microstrategy-Partner-for-New-Big-Data-Analytics?language=en_US

¹⁶ https://community.Microstrategy.com/s/article/Facebook-and-Microstrategy-Partner-for-New-Big-Data-Analytics?language=en_US

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Permissions and API Calls Analysis:

Wisdom has 67,137 authenticated users and 0 active users.

Under Graph API v1, the app was granted access to over 60 permissions, which allowed it access to a wide range of user data. Over 60,000 users gave access to user_likes, user_work_history, user_relationships and user_education_history, which are considered sensitive as this information is not easily obtainable from other sources. Other permissions granted by a smaller number of users would also have allowed access to data about groups, notes, religion and political views. In the context of Wisdom's use case, which involved curating information from users' profiles and presenting it in a format that prioritized their likes and interests, these accesses appear justified.

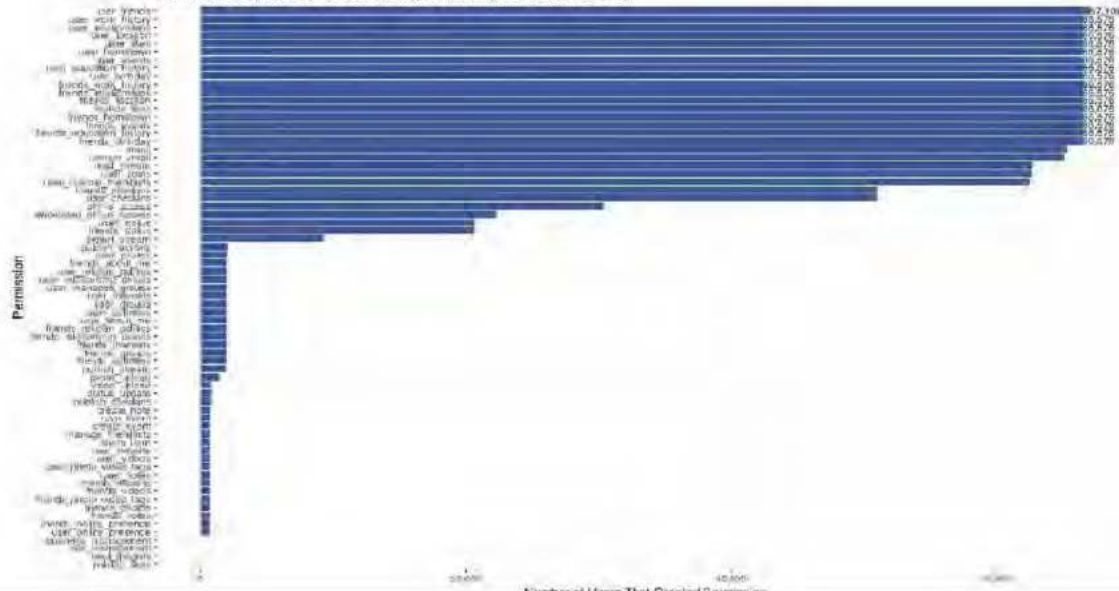
Over 60,000 people granted access to permissions such as friends_work_history, friends_relationships, friend_education_history, as well as other sensitive permissions that would have allowed access to details of their religion, politics, videos and photos, albeit in smaller numbers. Roughly 63,000 users granted the app highly sensitive read_stream permission, which allowed it to read content posted to user pages — including content generated by other users who did not install the app. Although this permission appears to be within the app's use case, it is unclear exactly what benefit users derived from it. **While these permissions could be justified under the app use case, the permissions would have allowed the app to gather data from individuals who had not opted to join the Wisdom network.**

[REDACTED] Records show that the app has continued to make API requests since this time, although over 99% of this activity occurred between November 2011 and May 2015 under Graph API v1. **In total, the app has made approximately 6.7 billion API requests, which averages approximately 74 million calls per month.** Some of the larger numbers of API requests were for get:Post/likes, fql.query, get:User/events, get:Post/comments and get:User/home among others. These methods have the capacity to collect huge amounts of personal data pertaining to users and their friends [REDACTED]

[REDACTED] The most frequently called method was gr:get:Post/likes, which was called over 2 billion times. This method gives insights into all members who like a Facebook post. Since one of the app's functions is organizing a user's Facebook feed, it is understandable to incorporate information regarding who likes any given post, presenting this information to the user within the app. But the collection's scale is concerning.

These charts illustrate the permissions granted to the app, as well as its API calls.

Permissions by Number of Users: Graph API v1 (155202421210030)



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Wisdom – Internal Test App (“WIT”)

App Name: Wisdom - Internal Test App

Developer Name: Loic Fabro (Microstrategy Inc.)

Reason for Escalation: Academic - Risk Prioritization App

App Status: Active

Preliminary Recommendation: RFI

Reason for Preliminary Recommendation: This app appears to be an internal test version of Wisdom, an application that has been granted highly sensitive permissions under Graph API v1. The company that developed the application, Microstrategy Inc, sells products relating to data systems and data analytics.

Background Summary

App Description: This is an internal testing version of the aforementioned Wisdom app by Microstrategy. WIT was created on October 31, 2011.

Graph version: v1

Special Relationship with Facebook: None identified

Additional information: None identified

Additional Contact Information: The primary email used for general inquiries at Microstrategy is info@Microstrategy.com.

Permissions and API Calls Analysis:

WIT has 240 authenticated users and 0 active users.

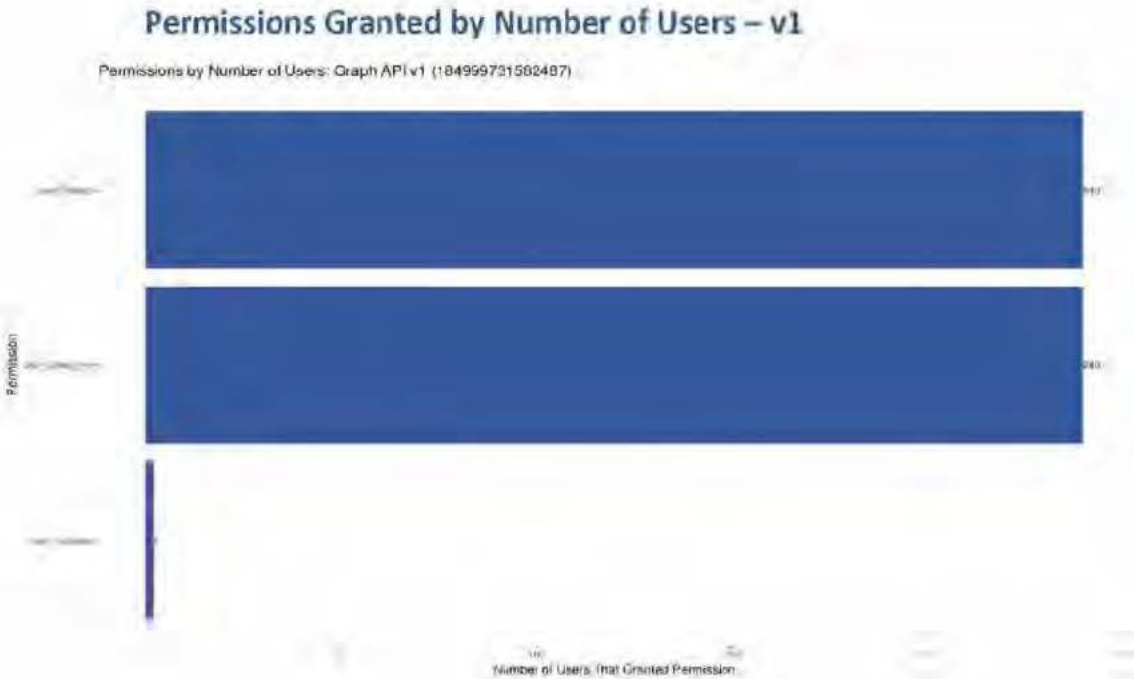
This app appears to be a test environment for the Wisdom app. WIT has a much smaller user base than the commercially released product. As such, it likely primarily comprises developer accounts, testing accounts, and other accounts closely related to the app’s developers — although this could not be confirmed without requesting further information from the developer.

Under Graph API v1, 240 users granted access to user_about_me and two users granted access to user_activities. These permissions allowed the app to access sensitive information related to user, such as interests, user generated biographies and other identifying information. These few sensitive permissions likely fall within the scope of the app’s function as a testing app for Wisdom, as they would be required to determine a user’s activities and other identifying information in order to create personalized recommendations. 240 users also granted access to the user_friends permission, but this is considered less sensitive in the absence of other permissions in place allowing the app to access personal information about users’ friends.

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WIT’s first registered API activity occurred in November 2011, around one month after its creation date. [REDACTED]

[REDACTED] The app made requests until April 2015 utilizing Graph API v1, making a total of 175 API requests. This equates to an average of approximately 3-4 calls per month – a small amount compared to other apps developed by Microstrategy. The most frequently made request was for gr:get:Post/likes, with 80 calls. This method returns information about likes made on a user’s Facebook feed. Since one of the functions of Wisdom is to organize a user’s Facebook feed, it seems reasonable to collect this data as part of a test app. The following chart illustrates the permissions granted to the app.



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Targeted RFI Questions

Below are RFI questions suggested for Microstrategy. The company's privacy policy provides the following contact details:

Attn: Office of the General Counsel
Microstrategy Incorporated
1850 Towers Crescent Plaza
Tysons Corner, Virginia 22182

privacy@Microstrategy.com

- Please list the data ever accessed by the subject apps via the Facebook API.
- For each app, please list:
 - Its purpose
 - The use case for all data access
 - What data was collected
 - What data was stored
 - Where that data was stored
- Identify all apps used as test environments (or test versions) of the Wisdom app.
- Has Microstrategy ever stored Facebook data sourced from the API? If so:
 - Where was it stored historically?
 - In what form?
 - Where is the data today?
 - In what form?
 - Did these data sets ever include user IDs?
- In addition to the six subject apps, we have identified over 200 Facebook apps as being associated with Microstrategy.
 - Have you ever aggregated data collected by these apps? If so:
 - What data?
 - In what form?
- Identify any Microstrategy product that has ever incorporated Facebook data sourced from the subject apps.

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- Explain in detail:
 - What the 2012 Wisdom privacy policy means by the “collective intelligence feature,” the Wisdom Service, and the Wisdom network of users.¹⁷
 - What are the data sources for each of these features?
 - Can this data be sourced to Facebook’s API?
- Has any data collected through the Wisdom app (App ID 155202421210030) ever been transferred to any database/product Microstrategy offered for sale?
 - Has any such data ever been transferred to Wisdom Professional?
- For data collected from users and their friends, was this data made available to app users who did not purchase Wisdom Professional?
- The Wisdom privacy policy stated that users of the Wisdom Service could use the collective intelligence feature, including options such as Wisdom Professional, “to analyze the User Information of the Wisdom Service’s entire network of users, provided that your User Information will only be accessible through the collective intelligence feature in aggregate form, anonymized form, or after removing your and your Facebook friends’ names, photos, videos and contact information”.
 - Explain in detail how data was aggregated, anonymized and removed of the aforementioned identifying information.
- Identify all third parties who have ever accessed Facebook data collected by the subject apps. For each, detail all reasons for the access.
- What has Microstrategy done with Facebook data collected by these apps?
- What happened to Wisdom and the other subject apps?
- Why did several of the subject apps appear to be abandoned after 2012?
 - E.g., Microstrategy’s post-2012 SEC filings no longer reference Wisdom.
- After the Wisdom business was wound down, how has data collected by Wisdom and the subject apps been used?
- Identify all Microstrategy apps that currently operate on the Facebook Platform.

¹⁷ <https://web.archive.org/web/20120715064900/http://www.wisdom.com:80/privacy-policy.html>

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1 Background Information from Facebook

This section contains background information about the subject apps, based upon Facebook records.

Alert

- **App ID:** 155018221207734
- **App Category:** LIFESTYLE_OTHER
- **Total authenticated users:** 225,845
- **Active Users:** 0
- **App publisher:** Strategy Network Incorporated¹⁸
- **App contact email:** support@alert.com
- **App alternate email:** support@alert.com
- **App creation date:** 2010-11-11
- **App earliest API version (e.g. 1 or 2):** 1
- **App is deleted (YES or NO):** NO
- **App deleted by:** N/A
- **App is a web app:** true
- **App is a mobile app:** true
- **Code Package IDs (iOS bundle ids and Android package and class names):** com.strategy.alert, com.strategy.alerthd, com.totalwine.alert, com.Microstrategy.alert4b.Guess, com.guess.alert, com.acmoore.alert, com.Microstrategy.alert4b.lids, com.lids.alert, com.Microstrategy.alert4b.logans, com.logans.alert, com.Microstrategy.alert4.Tillys, com.tillys.alert,

¹⁸ Strategy Network Incorporated (Delaware) was a subsidiary of Microstrategy as of February 18, 2011. <https://www.sec.gov/Archives/edgar/data/1050446/000119312511040481/dex211.htm>

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com.Microstrategy.alert4b.Totalwine, com.Microstrategy.alert4b.acmoore,
com.Microstrategy.alert, com.alert, com.alert.ui.activity.DispatchActivity

- **Privacy Policy URL:** <http://www.alert.com/privacy-policy.html>
- **App connect URL:** <http://staging.alert.com/>

Permissions that app was allowed to request from users:

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
manage_friendlists	V1.0	2	2013-08-06	2013-05-19
export_stream	V1.0	63	2014-12-20	2012-11-07
user_likes	>=V2.0	51	2015-06-19	2015-06-04
create_event	V1.0	46	2014-12-20	2010-11-18
friends_photo_video_tags	V1.0	29	2011-08-03	2010-11-17
friends_photos	V1.0	38	2012-11-22	2010-11-16
friends_status	V1.0	37	2012-11-22	2010-11-17
friends_website	V1.0	37	2012-11-22	2010-11-17
read_insights	V1.0	31	2012-08-21	2010-11-16
user_notes	V1.0	37	2012-11-22	2010-11-17
user_status	V1.0	37	2012-11-22	2010-11-17
	>=V2.0	468	2017-11-02	2015-05-22
user_online_presence	V1.0	29	2011-08-03	2010-11-17
user_website	V1.0	37	2012-11-22	2010-11-17
friends_notes	V1.0	37	2012-11-22	2010-11-17
friends_videos	V1.0	37	2012-11-22	2010-11-17
read_mailbox	V1.0	28	2011-08-03	2010-11-17

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Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_videos	V1.0	37	2012-11-22	2010-11-17
xmpp_login	V1.0	28	2011-08-03	2010-11-17
ads_management	V1.0	28	2011-08-03	2010-11-17
business_management	V1.0	28	2011-08-03	2010-11-17
friends_online_presence	V1.0	29	2011-08-03	2010-11-17
read_requests	V1.0	34	2011-08-03	2010-11-17
sms	V1.0	26	2011-08-03	2010-11-18
user_photo_video_tags	V1.0	29	2011-08-03	2010-11-17
user_photos	V1.0	38	2012-11-22	2010-11-16
	V1.0	46	2015-05-21	2012-11-10
publish_likes	V1.0	1	2013-09-24	2013-09-24
friends_activities	V1.0	34701	2014-12-20	2010-11-17
friends_hometown	V1.0	41452	2014-12-20	2010-11-17
friends_relationship_details	V1.0	41456	2014-12-20	2010-11-17
friends_work_history	V1.0	41456	2014-12-20	2010-11-17
publish_stream	V1.0	51299	2015-05-04	2010-11-18
read_stream	V1.0	33141	2014-12-20	2010-11-16
user_groups	V1.0	34671	2014-12-08	2010-11-17
user_interests	V1.0	34674	2014-12-08	2010-11-17
user_location	V1.0	53532	2014-12-20	2010-11-16
user_managed_groups	V1.0	34672	2014-12-08	2010-11-17

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Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_relationship_details	V1.0	41450	2014-12-20	2010-11-17
user_work_history	V1.0	41450	2014-12-20	2010-11-17
user_friends	>=V2.0	16338	2018-01-01	2015-05-22
publish_checkins	V1.0	7307	2015-05-04	2010-11-18
share_item	V1.0	6213	2015-05-04	2012-04-11
email	V1.0	185611	2015-05-21	2010-11-17
friends_about_me	V1.0	53542	2014-12-20	2010-11-17
friends_birthday	V1.0	41453	2014-12-20	2010-11-16
friends_interests	V1.0	34675	2014-12-08	2010-11-17
friends_likes	V1.0	53537	2014-12-20	2010-11-16
friends_location	V1.0	41457	2014-12-20	2010-11-16
friends_religion_politics	V1.0	41456	2014-12-20	2010-11-17
offline_access	V1.0	35597	2012-08-21	2010-11-16
read_custom_friendlists	V1.0	26085	2014-12-08	2010-11-17
user_about_me	V1.0	53527	2014-12-20	2010-11-17
user_education_history	V1.0	41446	2014-12-20	2010-11-17
user_events	V1.0	53528	2014-12-20	2010-11-16
user_posts	V1.0	33141	2014-12-20	2010-11-16
user_relationships	V1.0	41452	2014-12-20	2010-11-17
contact_email	V1.0	185503	2015-05-21	2010-11-17
user_friends	V1.0	184441	2015-05-21	2010-11-16

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Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_likes	V1.0	184248	2015-05-04	2010-11-16
friends_checkins	V1.0	36976	2014-12-20	2010-11-16
friends_education_history	V1.0	41452	2014-12-20	2010-11-17
friends_relationships	V1.0	41456	2014-12-20	2010-11-17
rsvp_event	V1.0	44704	2014-12-20	2010-11-18
user_religion_politics	V1.0	53527	2014-12-20	2010-11-17
contact_email	>=V2.0	37898	2017-04-10	2015-05-22
photo_upload	V1.0	12665	2015-05-04	2011-04-28
create_note	V1.0	7560	2015-05-04	2012-04-11
video_upload	V1.0	7552	2015-05-04	2012-04-11
user_questions	V1.0	8	2012-11-22	2011-08-31
user_birthday	>=V2.0	51	2015-06-19	2015-06-04
friends_questions	V1.0	8	2012-11-22	2011-08-31
status_update	V1.0	7560	2015-05-04	2012-04-11
user_birthday	V1.0	183850	2015-05-04	2010-11-16
friends_events	V1.0	41453	2014-12-20	2010-11-16
friends_groups	V1.0	34675	2014-12-08	2010-11-17
publish_actions	V1.0	52639	2015-05-04	2010-11-18
user_activities	V1.0	34701	2014-12-20	2010-11-17
user_checkins	V1.0	49047	2014-12-20	2010-11-16
user_hometown	V1.0	53527	2014-12-20	2010-11-17

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Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
email	>=V2.0	38296	2018-01-01	2015-05-22

Associated app developers:

Truncated ID	Name	Email	Country	Role
74	Trela Liu	daliu@Microstrategy.com	CN	developer
31	Zhenyu Wang	stupidb0648@sina.com	CN	disabled
94	Hung Le	hungle@live.com	US	app admin
98	Tejas Ranade	Redacted - PII	US	app admin
31	Zhenyu Wang	stupidb0648@sina.com	CN	developer
95	Cecile Yoon	Redacted - PII	US	analyst
95	Cecile Yoon	Redacted - PII	US	insights_user
98	Tejas Ranade	Redacted - PII	US	administrator
07	Jun Yuan	Redacted - PII	US	app admin
07	Jun Yuan	Redacted - PII	US	administrator
79	Dawn Marie Currin	Redacted - PII	US	analyst
79	Dawn Marie Currin	Redacted - PII	US	insights_user
98	Xiaochen Du	Redacted - PII	US	administrator
18	Ran Huang	emeirshow@163.com	CN	developer
94	Hung Le	hungle@live.com	US	administrator
59	Sonya Wang	Redacted - PII	CN	administrator
77	Kevin Xiao	Redacted - PII	US	developer

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Truncated ID	Name	Email	Country	Role
35	Jingle Guo	Redacted - PII	CN	developer
59	May Wang	Redacted - PII	US	developer
98	Xiaochen Du	Redacted - PII	US	app admin
59	Sonya Wang	Redacted - PII	CN	app admin
87	Diego Valenzuela	Redacted - PII	US	creator
34	Inbarajan Selvarajan	Redacted - PII	US	administrator
34	Inbarajan Selvarajan	Redacted - PII	US	app admin

Business entities associated with app:

N/A

Domains associated with app:

Domain	Notes
www.alert.com	
staging.alert.com	
api.alert.com	

Enforcement History:

Date	Action Taken	Action Taken By Actor	Title of	Reason for Enforcement	Action Status
2011-05-24	disabled app	Niket Biswas	Software Engineer	Extended Perm, Uninstall Triggered. Please contact pops@ for more information or to appeal [RS]	completed

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ALT Freeform Answers:

Truncated Review ID	Escalation Response	Freeform Type	Reviewer Freeform Response

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Emma

- **App name:** Emma, the Friendly Marketplace
- **App ID:** 100158893401448
- **App Category:** LIFESTYLE_OTHER
- **Total authenticated users:** 8,212
- **Active Users:** 0
- **App publisher:** Strategy Network Incorporated¹⁹
- **App contact email:** support@emma.com
- **App alternate email:** support@emma.com
- **App creation date:** 2011-03-18
- **App earliest API version (e.g. 1 or 2):** 1
- **App is deleted (YES or NO):** NO
- **App deleted by:** N/A
- **App is a web app:** true
- **App is a mobile app:** true
- **Code Package IDs (iOS bundle ids and Android package and class names):** com.strategy.emma,
- **Privacy Policy URL:** <http://www.emma.com/privacy-policy-basic.html>
- **App connect URL:** <https://www.emma.com/>

Permissions that app was allowed to request from users:

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_online_presence	V1.0	83	2011-07-28	2011-04-13
user_posts	V1.0	59	2011-07-28	2011-04-13
read_stream	V1.0	59	2011-07-28	2011-04-13
photo_upload	V1.0	84	2014-03-28	2012-01-24
publish_likes	V1.0	4	2013-10-26	2013-10-24

¹⁹ Strategy Network Incorporated (Delaware) was a subsidiary of Microstrategy Inc. as of February 18, 2011. <https://www.sec.gov/Archives/edgar/data/1050446/000119312511040481/dex211.htm>

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Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
share_item	V1.0	34	2014-01-10	2013-10-24
publish_checkins	V1.0	53	2014-03-28	2012-01-24
create_note	V1.0	84	2014-03-28	2012-01-24
status_update	V1.0	84	2014-03-28	2012-01-24
video_upload	V1.0	84	2014-03-28	2012-01-24
user_location	V1.0	8067	2014-03-30	2011-04-13
user_activities	V1.0	3564	2014-03-30	2011-04-13
publish_stream	V1.0	698	2014-03-28	2011-04-13
publish_actions	V1.0	699	2014-03-28	2011-04-13
contact_email	V1.0	8027	2014-03-30	2011-04-13
offline_access	V1.0	4914	2012-12-05	2011-04-13
user_birthday	V1.0	8067	2014-03-30	2011-04-13
user_hometown	V1.0	8067	2014-03-30	2011-04-13
user_work_history	V1.0	8067	2014-03-30	2011-04-13
user_photo_video_tags	V1.0	847	2011-10-01	2011-04-13
email	V1.0	8050	2014-03-30	2011-04-13
read_custom_friendlists	V1.0	7015	2014-03-30	2011-04-13
user_about_me	V1.0	8067	2014-03-30	2011-04-13
user_education_history	V1.0	8067	2014-03-30	2011-04-13
user_groups	V1.0	8067	2014-03-30	2011-04-13
user_managed_groups	V1.0	8067	2014-03-30	2011-04-13

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Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_photos	V1.0	8067	2014-03-30	2011-04-13
user_relationship_details	V1.0	8067	2014-03-30	2011-04-13
user_friends	V1.0	8211	2014-03-30	2011-04-13
user_interests	V1.0	8067	2014-03-30	2011-04-13
user_relationships	V1.0	8067	2014-03-30	2011-04-13
user_religion_politics	V1.0	8067	2014-03-30	2011-04-13
user_videos	V1.0	8055	2014-03-30	2011-04-13

Associated app developers:

Truncated ID	Name	Email	Country	Role
40	Hector Vazquez	Redacted - PII	US	administrator
79	Dawn Marie Currin	Redacted - PII	US	insights_user
79	Dawn Marie Currin	Redacted - PII	US	analyst
94	Hung Le	hungle@live.com	US	app admin
43	Junyan Huangfu	Redacted - PII	CN	analyst
94	Hung Le	hungle@live.com	US	creator
12	Weitong Lin	linweitong@126.com	CN	administrator
12	Weitong Lin	linweitong@126.com	CN	app admin
87	Peng Xiao	Redacted - PII	AE	administrator
18	Ran Huang	emeirshow@163.com	CN	developer
44	Siamak Ziraknejad	Redacted - PII	US	app admin
40	Hector Vazquez	Redacted - PII	US	app admin

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Truncated ID	Name	Email	Country	Role
44	Siamak Ziraknejad	Redacted - PII	US	administrator
35	Jingle Guo	Redacted - PII	CN	developer
80	Deepak Karuppiah	Redacted - PII	US	analyst
80	Deepak Karuppiah	Redacted - PII	US	insights_user
95	Cecile Yoon	Redacted - PII	US	analyst
95	Cecile Yoon	Redacted - PII	US	insights_user
43	Junyan Huangfu	Redacted - PII	CN	insights_user
31	Zhenyu Wang	stupidb0648@sina.com	CN	developer
31	Zhenyu Wang	stupidb0648@sina.com	CN	disabled
87	Peng Xiao	Redacted - PII	AE	app admin
94	Hung Le	hungle@live.com	US	administrator

Business entities associated with app:

N/A

Domains associated with app:

Domain	Notes
api.emma.com	
emma.com	
www.emma.com	

Enforcement History:

Date Action Taken	Action Taken By	Title of Actor	Reason for Enforcement	Action Status

Privileged and Confidential – A/C Privileged – Attorney Work Product

ALT Freeform Answers:

Truncated Review ID	Escalation Response	Freeform Type	Reviewer Freeform Response

Privileged and Confidential – A/C Privileged – Attorney Work Product

Loic

- **App name:** LoicFBApp
- **App ID:** 153729021352139
- **App Category:** LIFESTYLE_OTHER
- **Total authenticated users:** 360
- **Active Users:** 0
- **App publisher:** N/A
- **App contact email:** Redacted - PII
- **App alternate email:** Redacted - PII
- **App creation date:** 2011-02-23
- **App earliest API version (e.g. 1 or 2):** 1
- **App is deleted (YES or NO):** NO
- **App deleted by:** N/A
- **App is a web app:** true
- **App is a mobile app:** true
- **Code Package IDs (iOS bundle ids and Android package and class names):** com.Microstrategy.wisdomd, com.Microstrategy.wisdomu, com.Microstrategy.wisdomt, com.Microstrategy.wisdom.iphone.uat, com.Microstrategy.wisdom.iphone.test, com.Microstrategy.wisdom.iphone.ea, com.Microstrategy.wisdom.ea, com.Microstrategy.wisdom.uat, com.Microstrategy.wisdom.dev, com.Microstrategy.wisdom.test, com.Microstrategy.wisdom.ea, com.Microstrategy.wisdom.iphone.dev, com.wisdom.places, com.wisdom.places.ui.activity.WisdomMainActivity
- **Privacy Policy URL:**
http://www.wisdom.com/app/plugins/newESM/HTML/wisdom_FAQs.html
- **App connect URL:** <http://www.dev.wisdom.com/>

Permissions that app was allowed to request from users:

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
contact_email	V1.0	345	2014-12-22	2011-02-28
friends_birthday	V1.0	343	2014-12-22	2011-02-28

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
friends_checkins	V1.0	282	2014-09-04	2011-02-28
friends_hometown	V1.0	343	2014-12-22	2011-02-28
friends_likes	V1.0	343	2014-12-22	2011-02-28
friends_location	V1.0	343	2014-12-22	2011-02-28
friends_religion_politics	V1.0	45	2011-11-16	2011-02-28
friends_status	V1.0	98	2014-12-22	2011-02-28
user_about_me	V1.0	45	2011-11-16	2011-02-28
user_events	V1.0	342	2014-12-22	2011-02-28
user_groups	V1.0	45	2011-11-16	2011-02-28
user_hometown	V1.0	342	2014-12-22	2011-02-28
user_location	V1.0	342	2014-12-22	2011-02-28
user_status	V1.0	98	2014-12-22	2011-02-28
friends_notes	V1.0	7	2011-05-04	2011-02-28
manage_friendlists	V1.0	4	2011-05-04	2011-02-28
read_mailbox	V1.0	2	2011-02-28	2011-02-28
friends_games_activity	V1.0	27	2013-04-15	2011-04-24
photo_upload	V1.0	13	2014-04-30	2011-04-01
video_upload	V1.0	8	2014-04-30	2011-04-01
export_stream	V1.0	24	2014-12-22	2011-02-28
manage_pages	V1.0	9	2013-06-09	2011-02-28
pages_show_list	V1.0	9	2013-06-09	2011-02-28

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_photos	V1.0	48	2013-06-26	2011-02-28
email	V1.0	344	2014-12-22	2011-02-28
friends_groups	V1.0	45	2011-11-16	2011-02-28
friends_relationships	V1.0	343	2014-12-22	2011-02-28
offline_access	V1.0	126	2013-05-15	2011-02-28
user_friends	V1.0	358	2014-12-22	2011-02-28
user_likes	V1.0	342	2014-12-22	2011-02-28
user_relationships	V1.0	342	2014-12-22	2011-02-28
friends_about_me	V1.0	45	2011-11-16	2011-02-28
friends_events	V1.0	343	2014-12-22	2011-02-28
friends_interests	V1.0	45	2011-11-16	2011-02-28
read_custom_friendlists	V1.0	332	2014-12-22	2011-02-28
user_managed_groups	V1.0	45	2011-11-16	2011-02-28
publish_stream	V1.0	44	2014-04-30	2011-02-28
friends_activities	V1.0	45	2011-11-16	2011-02-28
friends_education_history	V1.0	343	2014-12-22	2011-02-28
friends_relationship_details	V1.0	45	2011-11-16	2011-02-28
friends_work_history	V1.0	343	2014-12-22	2011-02-28
read_stream	V1.0	335	2014-12-22	2011-02-28
user_activities	V1.0	45	2011-11-16	2011-02-28
user_birthday	V1.0	342	2014-12-22	2011-02-28

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_checkins	V1.0	282	2014-09-04	2011-02-28
user_education_history	V1.0	342	2014-12-22	2011-02-28
user_interests	V1.0	45	2011-11-16	2011-02-28
user_posts	V1.0	334	2014-12-22	2011-02-28
user_relationship_details	V1.0	45	2011-11-16	2011-02-28
user_religion_politics	V1.0	45	2011-11-16	2011-02-28
user_work_history	V1.0	342	2014-12-22	2011-02-28
publish_checkins	V1.0	8	2014-04-30	2011-02-28
publish_pages	V1.0	4	2013-06-09	2011-02-28
rsvp_event	V1.0	7	2011-05-04	2011-02-28
user_photo_video_tags	V1.0	7	2011-05-04	2011-02-28
user_videos	V1.0	8	2011-09-02	2011-02-28
publish_actions	V1.0	60	2014-04-30	2011-02-28
create_note	V1.0	7	2014-04-30	2011-04-06
user_games_activity	V1.0	27	2013-04-15	2011-04-24
create_event	V1.0	7	2011-05-04	2011-02-28
friends_online_presence	V1.0	7	2011-05-04	2011-02-28
friends_photo_video_tags	V1.0	7	2011-05-04	2011-02-28
friends_photos	V1.0	7	2011-05-04	2011-02-28
friends_videos	V1.0	7	2011-05-04	2011-02-28
read_insights	V1.0	2	2011-02-28	2011-02-28

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Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
sms	V1.0	2	2011-02-28	2011-02-28
xmpp_login	V1.0	2	2011-02-28	2011-02-28
friends_website	V1.0	7	2011-05-04	2011-02-28
read_requests	V1.0	2	2011-02-28	2011-02-28
user_notes	V1.0	7	2011-05-04	2011-02-28
user_online_presence	V1.0	7	2011-05-04	2011-02-28
user_website	V1.0	7	2011-05-04	2011-02-28
share_item	V1.0	7	2014-04-30	2011-04-06
status_update	V1.0	8	2014-04-30	2011-04-01
ads_management	V1.0	3	2012-11-28	2011-02-28
whitelisted_offline_access	V1.0	130	2014-12-22	2011-07-20
business_management	V1.0	10	2013-06-09	2011-02-28

Associated app developers:

Truncated ID	Name	Email	Country	Role
39	Melonie Brown	melonie.brown@racerme.com	US	developer
04	Olga Wisdomsky	Redacted - PII	US	tester
89	Yi Luo	Redacted - PII	US	administrator
73	Dom Wiz	Redacted - PII	US	tester
05	Loic Fabro	Redacted - PII	US	app admin
05	Loic Fabro	Redacted - PII	US	administrator

Privileged and Confidential – A/C Privileged – Attorney Work Product

Truncated ID	Name	Email	Country	Role
61	Grzegorz Rygula	g_rygula@poczta.fm	PL	administrator
92	Grze Kod	Redacted - PII	PL	tester
89	Yi Luo	Redacted - PII	US	app admin
61	Grzegorz Rygula	g_rygula@poczta.fm	PL	app admin
05	Loic Fabro	Redacted - PII	US	creator

Business entities associated with app:

N/A

Domains associated with app:

Domain	Notes
www.dev.wisdom.com	
10.15.73.61:8080	
www.wisdom.com	
wisdom.com	

Enforcement History:

Date Action Taken	Action Taken By	Title of Actor	Reason for Enforcement	Action Status

ALT Freeform Answers:

Truncated Review ID	Escalation Response	Freeform Type	Reviewer Freeform Response

Privileged and Confidential – A/C Privileged – Attorney Work Product

Usher

- **App ID:** 238063252871825
- **App Category:** UTILITIES_OTHER
- **Total authenticated users:** 4,828
- **Active Users:** 0
- **App publisher:** N/A
- **App contact email:** Redacted - PII
- **App alternate email:** support@usherevents.com
- **App creation date:** 2011-06-30
- **App earliest API version (e.g. 1 or 2):** 1
- **App is deleted (YES or NO):** NO
- **App deleted by:** N/A
- **App is a web app:** true
- **App is a mobile app:** false
- **Code Package IDs (iOS bundle ids and Android package and class names):** N/A
- **Privacy Policy URL:** <http://www.usherevents.com/privacy-policy/>
- **App connect URL:** <http://www.usherevents.com/>

Permissions that app was allowed to request from users:

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
share_item	V1.0	63	2014-01-14	2013-01-25
video_upload	V1.0	79	2014-03-26	2012-06-24
read_insights	V1.0	3	2012-08-16	2011-07-18
create_note	V1.0	79	2014-03-26	2012-06-24
photo_upload	V1.0	79	2014-03-26	2012-06-24
publish_checkins	V1.0	23	2014-03-26	2011-10-27
business_management	V1.0	18	2012-04-09	2011-07-18

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
publish_pages	V1.0	18	2012-04-09	2011-07-18
friends_activities	V1.0	51	2014-03-09	2011-10-27
user_checkins	V1.0	42	2012-02-23	2011-06-30
user_religion_politics	V1.0	41	2012-02-23	2011-06-30
user_about_me	V1.0	44	2012-12-19	2011-06-30
export_stream	V1.0	50	2014-03-09	2013-10-26
user_events	V1.0	4690	2014-03-26	2011-06-30
friends_interests	V1.0	3986	2014-03-09	2011-06-30
friends_location	V1.0	3986	2014-03-09	2011-06-30
friends_relationships	V1.0	3985	2014-03-09	2011-06-30
publish_actions	V1.0	4209	2014-03-26	2011-06-30
user_birthday	V1.0	3990	2014-03-09	2011-06-30
user_likes	V1.0	3958	2014-03-09	2011-06-30
user_relationships	V1.0	3986	2014-03-09	2011-06-30
email	V1.0	4529	2014-03-26	2011-06-30
friends_events	V1.0	3986	2014-03-09	2011-06-30
friends_likes	V1.0	3956	2014-03-09	2011-06-30
friends_photos	V1.0	3984	2014-03-09	2011-06-30
publish_stream	V1.0	4134	2014-03-26	2011-06-30
read_custom_friendlists	V1.0	3880	2014-03-09	2011-06-30
rsvp_event	V1.0	4189	2014-03-26	2011-06-30

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_location	V1.0	3991	2014-03-09	2011-06-30
user_photos	V1.0	4411	2014-03-26	2011-06-30
user_notes	V1.0	1	2011-10-27	2011-10-27
friends_education_history	V1.0	1	2011-10-27	2011-10-27
friends_relationship_details	V1.0	1	2011-10-27	2011-10-27
friends_status	V1.0	1	2011-10-27	2011-10-27
friends_videos	V1.0	1	2011-10-27	2011-10-27
friends_website	V1.0	1	2011-10-27	2011-10-27
friends_work_history	V1.0	1	2011-10-27	2011-10-27
manage_notifications	V1.0	3	2012-01-06	2011-10-27
user_education_history	V1.0	5	2012-12-19	2011-07-18
user_status	V1.0	1	2011-10-27	2011-10-27
publish_likes	V1.0	3	2013-10-29	2013-10-26
offline_access	V1.0	2760	2012-07-02	2011-06-30
friends_about_me	V1.0	3978	2014-03-09	2011-06-30
friends_birthday	V1.0	3986	2014-03-09	2011-06-30
read_stream	V1.0	3871	2014-03-09	2011-06-30
user_hometown	V1.0	3980	2014-03-09	2011-06-30
status_update	V1.0	79	2014-03-26	2012-06-24
friends_checkins	V1.0	1	2011-10-27	2011-10-27
friends_religion_politics	V1.0	1	2011-10-27	2011-10-27

Privileged and Confidential – A/C Privileged – Attorney Work Product

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_activities	V1.0	2	2011-10-27	2011-07-18
manage_friendlists	V1.0	1	2011-10-27	2011-10-27
user_relationship_details	V1.0	1	2011-10-27	2011-10-27
user_website	V1.0	2	2011-10-27	2011-07-18
user_work_history	V1.0	5	2012-12-19	2011-07-18
contact_email	V1.0	4519	2014-03-26	2011-06-30
user_friends	V1.0	4828	2014-03-26	2011-06-30
user_groups	V1.0	4687	2014-03-26	2011-06-30
user_managed_groups	V1.0	4687	2014-03-26	2011-06-30
create_event	V1.0	3902	2014-03-26	2011-06-30
friends_groups	V1.0	3986	2014-03-09	2011-06-30
friends_hometown	V1.0	3975	2014-03-09	2011-06-30
user_interests	V1.0	3988	2014-03-09	2011-06-30
user_posts	V1.0	3871	2014-03-09	2011-06-30
user_videos	V1.0	4407	2014-03-26	2011-06-30
manage_pages	V1.0	18	2012-04-09	2011-07-18
pages_show_list	V1.0	18	2012-04-09	2011-07-18

Associated app developers:

Truncated ID	Name	Email	Country	Role
40	Hector Vazquez	hector.vazquez@gmail.com	US	app admin

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Truncated ID	Name	Email	Country	Role
40	Hector Vazquez	Redacted - PII	US	creator
67	Jingjing Shi	shijingjing02@163.com	SG	app admin
65	Jingdi Han	Redacted - PII	CN	app admin
94	Hung Le	hungle@live.com	US	administrator
40	Hector Vazquez	Redacted - PII	US	administrator
07	Jun Yuan	Redacted - PII	US	app admin
77	Jiang Wu	Redacted - PII	CN	app admin
84	Yue Wang	Redacted - PII	CN	analyst
31	Zhenyu Wang	stupidb0648@sina.com	CN	disabled
87	Diego Valenzuela	Redacted - PII	US	administrator
87	Diego Valenzuela	Redacted - PII	US	app admin
76	Kai Zhang	zhangkai108@qq.com	US	app admin
44	Siamak Ziraknejad	Redacted - PII	US	administrator
44	Siamak Ziraknejad	Redacted - PII	US	app admin
84	Yue Wang	Redacted - PII	CN	insights_user
77	Kevin Xiao	Redacted - PII	US	app admin
20	Xiaomo Liu	Redacted - PII	US	insights_user
30	Bo Xia	Redacted - PII	CN	administrator
30	Bo Xia	Redacted - PII	CN	app admin
74	Weiguang Zhang	Redacted - PII	CN	app admin
35	Jingle Guo	Redacted - PII	CN	developer
76	Kai Zhang	zhangkai108@qq.com	US	administrator

Privileged and Confidential – A/C Privileged – Attorney Work Product

Truncated ID	Name	Email	Country	Role
27	Sergey Mironenko	Redacted - PII	US	app admin
31	Zhenyu Wang	stupidb0648@sina.com	CN	developer
78	Feng Jingcheng	Redacted - PII	CN	app admin
18	Ran Huang	emeirshow@163.com	CN	developer
65	Jingdi Han	Redacted - PII	CN	administrator
67	Jingjing Shi	shijingjing02@163.com	SG	administrator
27	Sergey Mironenko	Redacted - PII	US	administrator
80	Deepak Karupiah	Redacted - PII	US	insights_user
80	Deepak Karupiah	Redacted - PII	US	analyst
07	Jun Yuan	Redacted - PII	US	administrator
77	Jiang Wu	Redacted - PII	CN	administrator
79	Dawn Marie Currin	Redacted - PII	US	insights_user
79	Dawn Marie Currin	Redacted - PII	US	analyst
77	Kevin Xiao	Redacted - PII	US	administrator
95	Cecile Yoon	Redacted - PII	US	insights_user
95	Cecile Yoon	Redacted - PII	US	analyst
74	Weiguang Zhang	Redacted - PII	CN	administrator
94	Hung Le	hungle@live.com	US	app admin
78	Feng Jingcheng	Redacted - PII	CN	administrator
20	Xiaomo Liu	Redacted - PII	US	analyst

Business entities associated with app:

N/A

Privileged and Confidential – A/C Privileged – Attorney Work Product

Domains associated with app:

Domain	Notes
www.usherevents.com	
www.Microstrategy.com	
usherevents.com	

Enforcement History:

Date	Action Taken	Action Taken By	Title of Actor	Reason for Enforcement	Action Status
2011-08-25	disabled app	stripe	computer	Events Generic [RS]. Contact pops@ to appeal	completed

ALT Freeform Answers:

N/A

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Wisdom

- **App ID:** 155202421210030
- **App Category:** LIFESTYLE_OTHER
- **Total authenticated users:** 67,137
- **Active Users:** 0
- **App publisher:** N/A
- **App contact email:** support@wisdom.com
- **App alternate email:** support@wisdom.com
- **App creation date:** 2011-04-15
- **App earliest API version (e.g. 1 or 2):** 1
- **App is deleted (YES or NO):** NO
- **App deleted by:** N/A
- **App is a web app:** true
- **App is a mobile app:** true
- **Code Package IDs (iOS bundle ids and Android package and class names):** com.strategy.wisdom, com.strategy.wisdom.iphone, com.Microstrategy.wisdom, com.Microstrategy.wisdom.iphone,
- **Privacy Policy URL:** <http://www.wisdom.com/privacy-policy.html?appcenter=1>
- **App connect URL:** <http://www.wisdom.com/>

Permissions that app was allowed to request from users:

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
friends_online_presence	V1.0	651	2011-05-05	2011-04-17
rsvp_event	V1.0	662	2011-05-05	2011-04-17
publish_likes	V1.0	1	2013-08-03	2013-08-03
share_item	V1.0	659	2015-02-19	2011-04-17
video_upload	V1.0	767	2015-02-19	2011-04-17
friends_videos	V1.0	655	2011-05-05	2011-04-17

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
manage_friendlists	V1.0	661	2011-05-05	2011-04-17
publish_checkins	V1.0	758	2015-02-19	2011-04-17
user_notes	V1.0	655	2011-05-05	2011-04-17
read_insights	V1.0	1	2012-08-15	2012-08-15
friends_notes	V1.0	655	2011-05-05	2011-04-17
user_videos	V1.0	655	2011-05-05	2011-04-17
user_website	V1.0	655	2011-05-05	2011-04-17
business_management	V1.0	2	2012-10-30	2011-04-27
friends_activities	V1.0	1965	2011-11-22	2011-04-17
friends_relationship_details	V1.0	1965	2011-11-22	2011-04-17
friends_religion_politics	V1.0	1965	2011-11-22	2011-04-17
user_about_me	V1.0	1965	2011-11-22	2011-04-17
read_custom_friendlists	V1.0	62545	2015-04-30	2011-04-17
user_birthday	V1.0	66576	2015-04-30	2011-04-17
user_education_history	V1.0	66576	2015-04-30	2011-04-17
user_events	V1.0	66576	2015-04-30	2011-04-17
user_likes	V1.0	66576	2015-04-30	2011-04-17
user_relationships	V1.0	66576	2015-04-30	2011-04-17
user_work_history	V1.0	66576	2015-04-30	2011-04-17
friends_status	V1.0	20625	2015-04-30	2011-04-17
email	V1.0	65315	2015-04-30	2011-04-17

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
friends_checkins	V1.0	51044	2015-04-30	2011-04-17
friends_events	V1.0	66576	2015-04-30	2011-04-17
friends_hometown	V1.0	66576	2015-04-30	2011-04-17
friends_groups	V1.0	1965	2011-11-22	2011-04-17
user_activities	V1.0	1965	2011-11-22	2011-04-17
user_groups	V1.0	1965	2011-11-22	2011-04-17
user_interests	V1.0	1965	2011-11-22	2011-04-17
user_managed_groups	V1.0	1965	2011-11-22	2011-04-17
user_relationship_details	V1.0	1965	2011-11-22	2011-04-17
user_photos	V1.0	2038	2015-03-30	2011-04-17
photo_upload	V1.0	1360	2015-02-19	2011-04-17
friends_about_me	V1.0	1966	2012-08-15	2011-04-17
friends_interests	V1.0	1965	2011-11-22	2011-04-17
user_religion_politics	V1.0	1965	2011-11-22	2011-04-17
publish_actions	V1.0	2063	2015-02-19	2011-04-17
create_note	V1.0	694	2015-02-19	2011-04-17
status_update	V1.0	767	2015-02-19	2011-04-17
create_event	V1.0	662	2011-05-05	2011-04-17
friends_photo_video_tags	V1.0	655	2011-05-05	2011-04-17
friends_photos	V1.0	655	2011-05-05	2011-04-17
friends_website	V1.0	655	2011-05-05	2011-04-17

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Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_online_presence	V1.0	649	2011-05-05	2011-04-17
user_photo_video_tags	V1.0	655	2011-05-05	2011-04-17
contact_email	V1.0	65150	2015-04-30	2011-04-17
friends_birthday	V1.0	66576	2015-04-30	2011-04-17
user_location	V1.0	66576	2015-04-30	2011-04-17
user_posts	V1.0	62704	2015-04-30	2011-04-17
user_status	V1.0	20625	2015-04-30	2011-04-17
whitelisted_offline_access	V1.0	22307	2015-04-30	2011-04-18
friends_education_history	V1.0	66576	2015-04-30	2011-04-17
friends_likes	V1.0	66576	2015-04-30	2011-04-17
friends_location	V1.0	66576	2015-04-30	2011-04-17
friends_relationships	V1.0	66576	2015-04-30	2011-04-17
friends_work_history	V1.0	66576	2015-04-30	2011-04-17
offline_access	V1.0	30338	2013-06-04	2011-04-17
read_stream	V1.0	62774	2015-04-30	2011-04-17
user_checkins	V1.0	51043	2015-04-30	2011-04-17
user_friends	V1.0	67106	2015-04-30	2011-04-17
user_hometown	V1.0	66576	2015-04-30	2011-04-17
export_stream	V1.0	9319	2015-04-29	2011-04-17
publish_stream	V1.0	1895	2015-02-19	2011-04-17
ads_management	V1.0	2	2012-10-30	2011-04-27

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Associated app developers:

Truncated ID	Name	Email	Country	Role
94	Hung Le	hungle@live.com	US	creator
05	Loic Fabro	Redacted - PII	US	app admin
05	Loic Fabro	Redacted - PII	US	administrator

Business entities associated with app:

N/A

Domains associated with app:

Domain	Notes
wisdom.com	
www.wisdom.com	

Enforcement History:

Date	Action Taken	Action Taken By	Title of Actor	Reason for Enforcement	Action Status
2011-04-18	disabled app	Niket Biswas	Software Engineer	Extended Perm, Async. Please contact pops@ for more information or to appeal [RS]	completed

ALT Freeform Answers:

Truncated Review ID	Escalation Response	Freeform Type	Reviewer Freeform Response

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WIT

- **App ID:** 184999731582487
- **App Category:** UNKNOWN
- **Total authenticated users:** 240
- **Active Users:** 0
- **App publisher:** N/A
- **App contact email:** Redacted - PII
- **App alternate email:** N/A
- **App creation date:** 2011-10-31
- **App earliest API version (e.g. 1 or 2):** 1
- **App is deleted (YES or NO):** NO
- **App deleted by:** N/A
- **App is a web app:** false
- **App is a mobile app:** false
- **Code Package IDs (iOS bundle ids and Android package and class names):** N/A
- **Privacy Policy URL:**
http://www.wisdom.com/wisdominternaltest/plugins/StrategyLoginESM/jsp/wisdom_privacy_policy.jsp
- **App connect URL:** N/A

Permissions that app was allowed to request from users:

Permission Name	API Version	Number of Users that Granted Permission	Most Recent Date Permission Granted	Earliest Date Permission Granted
user_friends	V1.0	240	2015-02-02	2011-11-02
user_about_me	V1.0	240	2015-02-02	2011-11-02
user_activities	V1.0	2	2015-02-02	2015-01-16

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Associated app developers:

Truncated ID	Name	Email	Country	Role
05	Loic Fabro	Redacted - PII	US	app admin
05	Loic Fabro	Redacted - PII	US	administrator
05	Loic Fabro	Redacted - PII	US	creator

Business entities associated with app:

N/A

Domains associated with app:

Domain	Notes
www.wisdom.com	

Enforcement History:

N/A

ALT Freeform Answers:

N/A

2 App Developer's Statements about Data Usage & Privacy Policy

Research was performed to identify statements Microstrategy has made about how the subject apps access, collect and use Facebook user data. The following section describes three items:

1. A 2012 statement by Microstrategy's CEO about data collected from Facebook;
2. A 2011 statement by Microstrategy regarding protecting data security;
3. Noteworthy excerpts from relevant privacy policies.

CEO's Statements about Data Collection

In a 2012 article, Microstrategy CEO Michael Saylor was quoted as stating that the Wisdom app aggregates anonymized Facebook user data, adds data from 80,000 people every day, and had a network of more than 4 million people. Microstrategy also stated that it will help companies "take advantage" of that data.

According to the article, which is titled "Microstrategy bets big on Facebook data":

"Wisdom enables Facebook data mining

*Microstrategy's free Wisdom app, which has been available since November, lets Facebook users analyze their own friends' information — who has birthdays in June, who likes Barack Obama, who's a Mitt man — but **it also aggregates that anonymized data on the back end.***

Companies can take advantage of that rich trove of demographic and psychographic information, and Microstrategy will help them do so.

"It gives you a window into the Facebook universe," [Microstrategy CEO Michael] Saylor said. Microstrategy started gathering this Facebook data from Wisdom on Nov. 21 and has added 80,000 people's data every day, Saylor said on Tuesday. Wisdom network now includes data for more than 4 million people."²⁰

²⁰ "Microstrategy bets big on Facebook data," Gigaom.com January 25, 2012
<https://gigaom.com/2012/01/25/Microstrategy-bets-big-on-facebook-data/>

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Company Statement about Data Security

A 2011 press release surrounding the launch of Wisdom addressed the issue of data security, stating that all user information was “meticulously safeguarded.” The full section stated:²¹

“The intelligence created by Wisdom is not only personalized and timely, but also meticulously safeguarded. You give Wisdom a token of trust by granting it specific Facebook permissions to serve you. In return, Wisdom trusts only you, and secures your information against any unauthorized access. Faithful to Facebook user privacy settings, Wisdom also ensures that you won’t see any data in the application that is not available to you on Facebook.”²²

²¹ <https://ir.Microstrategy.com/news-releases/news-release-details/Microstrategy-introduces-wisdom-facebook-apps-iphone-ipad>

²² <https://ir.Microstrategy.com/news-releases/news-release-details/Microstrategy-introduces-wisdom-facebook-apps-iphone-ipad>

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Supplementary Wisdom Privacy Statement

Microstrategy's public stance about data privacy is echoed in the following explanation regarding data privacy on a 2012 version of its website, in which the company states that it takes data privacy seriously.²³ This statement explains why the app requests access to certain kinds of information and requests users give up their Facebook profile in order to access the broader network.²⁴

Wisdom™ is Serious about Your Privacy

Wisdom takes data privacy very seriously. Safeguards protect your data in order to make your experience with Wisdom more enjoyable and interesting.

Go to the App > **Available on the App Store**

What Wisdom Asks You and How This Enhances Your Facebook Experience.
When you install Wisdom, you'll be asked for access to information that is used to improve your Facebook social experience:

- Basic Information**
Wisdom allows you to easily classify your social network into easy-to-consume lists based on Romance, Moods, Career, and more! For this, Wisdom needs access to your basic information.
- Profile Information**
Wisdom gives you insights into which Events, interests, Places, are most popular in your network, together with other cool stats. For this, Wisdom needs access to your profile information.
- Family & Relationships**
Wisdom lets you to stay better connected with the people who matter most. You can also create your own lists of friends based on specific demographics to get a better view of your network. For this, Wisdom needs access to your family and relationships information.
- Friends Information**
Wisdom only shows posts made by your friends, eliminating posts sent from pages you like and apps you use. Stay in touch with your friends and easily find their latest news and updates. For this, Wisdom needs access to your friends' information they share with you.
- News Feed**
Wisdom displays more posts per screen allowing you to sift through the information faster than ever. Plus, look back at up to 30 days of news instead of just 3. For this, Wisdom needs access to your news feed. You can turn off this feature at a later time.
- Custom Friend Lists**
Wisdom presents you interesting views like favorite TV shows, movies, books, popular events and top pages – across all your friends or by the Facebook Friend Lists you've already built. For this, Wisdom needs access to your custom friend lists. You can turn off this feature at a later time.
- Check-ins**
Wisdom provides you unique insights on Places – check-ins, current only, and hometown – showing which venues are most popular and fun demographics. Know exactly what to expect before you go! For this, Wisdom needs to access check-ins from across your network. You can turn off this feature at a later time.
- Anytime Access**
Wisdom regularly checks for new posts and updates to your network to allow you to be on top of the latest and most important information on your friends. For this, Wisdom needs "Anytime Access" to your information to keep it updated for whenever you need it. You can turn off this feature at a later time.
- Send Me Email**
Wisdom can send you information regarding updates to the app and new products from Strategy Analytics, Inc.

To change permissions at any time, within Facebook, go to Accounts > Privacy Settings > Apps and Websites

²³ <https://web.archive.org/web/20120315201200/http://www.wisdom.com/your-permissions/>
https://web.archive.org/web/20120314145721/http://www.readwriteweb.com/archives/this_app_tells_you_all_about_your_facebook_friends.php

²⁴ <https://web.archive.org/web/20120315221952/http://blogs.aberdeen.com/business-intelligence/is-microstrategy-hot-again/>

Microstrategy Privacy Policies

A privacy policy associated with Wisdom raises serious concerns regarding Microstrategy's practices with respect to access, collection and use of Facebook user data. A 2012 policy for the Wisdom Service states that Microstrategy collects Facebook user data, offers an intelligence service and sells features to the service, raising concern about the potential for data misuse.

Wisdom Privacy Policy Dating from 2012

At the beginning of its 2012 privacy policy, Microstrategy overtly states that the company will not sell PII to advertisers or spammers, but they will share information collected in part from the Wisdom application as outlined in the policy.

Noteworthy sections of the Wisdom privacy policy, as revised on June 10, 2012, and captured through the Wayback Machine, are included below.²⁵ A full copy of the Wisdom privacy policy is available in **Appendix H**.

*"This Privacy Policy is designed to show you what information about you we collect through the Wisdom Application on the social network operated by **Facebook** (the "Facebook Application"), the related mobile device software applications (the "Mobile Software") and the Wisdom website at wisdom.com (together with the Facebook Application and the Mobile Software, the "Wisdom Service"), and how we use and share that information."*

Microstrategy stated that it provides access to Wisdom Professional or an "entire network of Wisdom users".

*"The Wisdom Service enables you to perform powerful and interesting analyses of your network of friends and, through the collective intelligence feature, including options for enhanced analyses such as **Wisdom Professional**, the entire network of **Wisdom users**. In order to facilitate these processes, the Wisdom Service may collect personal information and content that was provided by you or other users to Facebook or was associated by Facebook with a particular user ("Facebook Information"). When you use the Wisdom Service, we may collect any Facebook Information you have made visible to "Everyone" on Facebook as well as the information Facebook designates as your publicly available information. This includes your:*

*name
profile picture
gender
current city*

²⁵ <https://web.archive.org/web/20120715064900/http://www.wisdom.com:80/privacy-policy.html>

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networks
friend list
pages

When first using the Wisdom Service, you will also be asked to grant us access to additional Facebook Information that you are allowed to share under Facebook's policies. Currently, we ask that you share all information that you are allowed to share under Facebook policies. This information includes:

your contact information, including your email address, phone number and mailing address
items you have "liked"
your profile information
posts in your newsfeed
photos and videos you have uploaded to Facebook
your calendar of events
your custom friend lists
your online presence
your "check-ins" and friends' "check-ins"
your family members and relationship details and status
information about your friends

Even if you have not explicitly allowed us access to any of your Facebook Information, we may collect information about you when your friends on Facebook allow access to and use the Wisdom Service, subject to your Facebook settings. We may also send you emails and ***post on your Facebook Wall*** in connection with your use of the Wisdom Service. In addition to the Facebook Information, we may collect information we receive from you in connection with your requests for customer support, your user feedback or other communications you direct to us. We may also collect information related to your usage of the Wisdom Service, such as how often you log into the Wisdom Service and what functions of the Wisdom Service you use the most frequently. Any such information will be treated in the same manner as Facebook Information."

Note: The paragraph above appears to indicate that the policy permits Microstrategy to collect information about people if a friend permits access — even in cases where

no user consent is provided, and where the user may not have opted into the Wisdom Service.

This may violate the following Facebook Platform Policies:²⁶

- “A user’s friends’ data can only be used in the context of the user’s experience on your application.” (2.4)
- “Subject to certain restrictions, including on transfer, users give you their basic account information when they connect with your application. For all other data obtained through use of the Facebook API, you must obtain explicit consent from the user who provided the data to us before using it for any purpose other than displaying it back to the user on your application.” (2.5)
- “You cannot use a user’s friend list outside of your application, even if a user consents to such use, but you can use connections between users who have both connected to your application.” (2.11)

Microstrategy outlined how they will use user information, which included in a “collective intelligence” feature that appears to allow analysis of the broader Wisdom network. Microstrategy describes the “collective intelligence” feature as including user information in aggregate, anonymized or in a form after removing certain identifying information. In the excerpt below, Microstrategy defines “User Information” as “Facebook Information,” or “personal information and content that was provided by you or other users to Facebook or was associated by Facebook with a particular user.”

“The Company will only use your User Information for the following purposes:

- *to enable you to use the Wisdom Service to analyze your network of friends and the content available within your network*
- *to enable you and other users of the Wisdom Service to use the collective intelligence feature, including options such as Wisdom Professional, to analyze the User Information of the **Wisdom Service’s entire network of users**, provided that your User Information will only be accessible through the collective intelligence feature in **aggregate form, anonymized form, or after removing your and your Facebook friends’ names, photos, videos and contact information***
- *if your Facebook privacy settings allow such access, to enable your friends to use the Wisdom Service to analyze their network of friends and the content available within their networks*
- *to post on your Wall or to send you emails regarding your use of the Wisdom Service*
- *to provide technical support and to respond to your inquiries*

²⁶ The Facebook Platform Policy cited was last revised on April 25, 2012.
<https://web.archive.org/web/20120501025801/https://developers.facebook.com/policy/>

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- *to communicate about new features or promotions of the Wisdom Service*
- *to prevent fraud or potentially illegal activities and to enforce our Terms of Use*
- *to solicit your feedback to improve the Wisdom Service and your experience using it*
- *to administer and improve the Wisdom Service*
- *to keep track of your activity patterns, preferences and location in order to improve the level of service you receive from the Wisdom Service (we may use your Mobile Information for this purpose)*
- ***to conduct research and analysis to enable us to improve the Wisdom Service and develop and improve other products and services of ours and our affiliates***
- *to promote the Wisdom Service and other products and services of ours and our affiliates, including in private and publicly available product demonstrations and in communications with social media partners, media outlets and other third parties, provided that your User Information will only be used in such promotions in aggregate form, anonymized form, or after removing your and your Facebook friends' names, photos, videos and contact information"*

Note: This statement raises concerns about how data is collected and used within the "collective intelligence" feature, i.e. is Facebook user data made available in aggregate or anonymized form in a database that is searchable to others or in a commercial capacity? If so, this may violate the following Facebook Platform Policies:²⁷

- "If you offer a service for a user that integrates user data into a physical product (such as a scrapbook or calendar), you must only create a physical product for that user's personal and non-commercial use."
(1.4)

Microstrategy states that they sell aspects of the Wisdom Service to people who pay a fee.

"Some of our Wisdom Service functionality is available only to Users who pay a fee, and we may require payment of a fee for the ability to use other Wisdom Service functionality in the future. We will not sell your personally identifiable User Information to anyone, including advertisers or spammers. You may choose to not receive

²⁷ The Facebook Platform Policy cited was last revised on April 25, 2012.
<https://web.archive.org/web/20120501025801/https://developers.facebook.com/policy/>

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communications from us about new features or promotions of the Wisdom Service by opting out of such communications.” [...]

“We may share your User Information in the following cases:

- **With Affiliates and Third-Party Service Providers:** We may disclose your User Information to our affiliates and third-party service providers to the extent permitted by Facebook. Except as otherwise set forth in this section, we will only share your User Information with any such parties in connection with the administration of the Wisdom Service or for the purpose of improving your experience with the Wisdom Service. Third party service providers are not authorized by us to use or disclose your User Information except as necessary to perform services on our behalf or comply with legal requirements.
- **With other Users of the Wisdom Service:** We may share your User Information with other users of the Wisdom Service through the *collective intelligence* feature, including options such as **Wisdom Professional, to enable them to analyze the User Information of the Wisdom Service’s entire network of users, provided that your User Information will only be accessible through the collective intelligence feature in aggregate form, anonymized form, or after removing your and your Facebook friends’ names, photos, videos and contact information.**
- **In Connection with Promotions:** We may share your User Information in order to promote the Wisdom Service and other products and services of ours and our affiliates, including in private and publicly available product demonstrations and in communications with social media partners, media outlets and other third parties, provided that we will only share your User Information in such promotional efforts in aggregate form, anonymized form, or after removing your and your Facebook friends’ names, photos, videos and contact information.
- **With Your Consent:** We may share your User Information with third parties with your consent.
- **As Required by Law:** We may disclose any User Information we deem necessary, in our sole discretion, to comply with any applicable law, regulation, legal process or governmental request.
- **To Prevent Harm or Loss:** We may disclose User Information when we believe, in our sole discretion, disclosure is necessary or appropriate to prevent physical harm or financial loss or in connection with suspected or actual illegal activity.
- **In Connection With a Sale of Our Business:** We also reserve the right to transfer User Information in the event we sell or transfer all or a portion of our business or assets. Should such a sale or transfer occur, we will use reasonable efforts to direct the transferee to use the User Information in a manner that is consistent with this Privacy Policy.

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Following such a sale or transfer, you may contact the entity to which we transferred the User Information with any inquiries concerning the processing of that information.”²⁸

Microstrategy Current Policy

Microstrategy’s website offers a privacy policy, but it does not reference Wisdom — or any tool that overtly collects data from Facebook. Microstrategy’s privacy policy was effective as of December 4, 2018, and includes a section regarding how they protect personal information. An excerpt from the policy is provided below and a full copy is included in **Appendix A**.

“How We Protect Personal Information

We maintain administrative, technical and physical safeguards designed to protect the Personal Information you provide against accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use.

We also ensure that, in compliance with applicable law, we do not retain Personal Information longer than necessary. We will keep personal data about you for as long as we have a relationship with you, for example as long as you wish to keep receiving marketing messages from us, or as long as you are a customer (and for a reasonable period thereafter). When determining how long to retain Personal Information after we no longer have a relationship with you, we take into account how long our customers usually want to continue hearing from us, our legal obligations and the expectations of regulators, as well as the length of time information is needed for internal audit purposes and to exercise or defend our legal rights.”²⁹

²⁸ <https://web.archive.org/web/20120613202640/http://www.wisdom.com:80/privacy-policy.html>

²⁹ <https://www.microstrategy.com/us/legal-folder/privacy-policy>

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Additional Privacy Policies

Facebook records for the subject apps contained several privacy policy URLs, which are no longer active. In most instances, archives of the privacy policies were found dating from 2011 to 2013. The chart below identifies the app name, app ID, privacy policy URL (per Facebook records) and the Appendix section where full copies of the archived policies can be found. In addition, a privacy policy is currently posted on Microstrategy's website, which is detailed below.³⁰

App	App ID	Privacy Policy URL from Facebook Records	Appendix
		N/A – Microstrategy current privacy policy	A
Alert	155018221207734	http://www.alert.com/privacy-policy.html Archives of the privacy policy and terms and conditions were found.	B & C
Emma, the Friendly Marketplace	100158893401448	http://www.emma.com/privacy-policy-basic.html A privacy policy is no longer posted at this URL; an archive was found dating from July 2012.	D
LoicFBApp	153729021352139	http://www.wisdom.com/app/plugins/newESM/HTML/wisdom_FAQs.html A privacy policy is no longer posted at this URL and no archives of the URL were found. See Wisdom.	-
Usher for Managing Events	238063252871825	http://www.usherevents.com/privacy-policy/ A privacy policy is no longer posted at this URL; an archive is available.	E
Wisdom – Internal Test App	184999731582487	http://www.wisdom.com/wisdominternaltest/plugins/StrategyLoginESM/jsp/wisdom_privacy_policy.jsp A privacy policy is no longer posted at this URL and no archives of the URL were found.	F & G
Wisdom	155202421210030	http://www.wisdom.com/privacy-policy.html?appcenter=1 A privacy policy is no longer posted at this URL and no archives of the URL were found. See F & G for privacy policy archives.	F, G & H

³⁰ <https://www.Microstrategy.com/us/legal-folder/privacy-policy>

3 App Business Information

Microstrategy

The six apps reviewed as part of this report were developed by Microstrategy Inc, a business software developer founded in 1989 and headquartered in Tysons Corner, VA.³¹ The company was co-founded by Michael J Saylor, who currently serves as its Chairman and CEO, and Sanju Bansal, who resigned in 2013.³² The business employs over 2,000 people and is publicly traded on the NASDAQ stock exchange.³³

Microstrategy develops analytics platforms for businesses. These are offered through licensing arrangements and cloud-based subscriptions.³⁴ The company describes itself in corporate literature as providing “... powerful software solutions and expert services that empower every individual with actionable intelligence...”

Key service lines currently available from Microstrategy include:³⁵

- **Microstrategy Desktop** - a single-user tool for conducting visual data analytics.³⁶
- **Microstrategy Analytics Enterprise** – a suite of modelling, reporting and administrative tools, comprising:³⁷
 - **Microstrategy Server** – a service providing analytical processing and job management services;
 - **Microstrategy Web** – an interactive reporting and analysis interface;
 - **Microstrategy Mobile** – software that enables users to view data from Microstrategy Web or Microstrategy Developer from portable devices;
 - **Microstrategy Architect** – a data visualization modelling platform;
 - **Microstrategy Developer** – a business intelligence software platform designed for desktop computers.
- **Microstrategy Cloud** – a cloud-based business analytics platform that includes technical support and advisory services.

31 <https://www.linkedin.com/company/Microstrategy/about/>

32 <https://ir.Microstrategy.com/corporate-governance/board-of-directors>

<https://www.bizjournals.com/washington/blog/techflash/2013/11/Microstrategy-co-founder-sanju-k.html>

33 <https://markets.ft.com/data/equities/tearsheet/summary?s=MSTR:NSQ>

<https://www.owler.com/company/Microstrategy>

34 <https://www.reuters.com/finance/stocks/companyProfile/MSTR.O>

35 <https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=384976>

36 https://www2.Microstrategy.com/producthelp/10.7/IntroMSTR/WebHelp/Lang_1033/content/intromstr/Microstrategy_desktop.htm

37 https://www2.Microstrategy.com/producthelp/10.7/IntroMSTR/WebHelp/Lang_1033/content/intromstr/Microstrategy_desktop.htm

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Microstrategy claims to serve a broad range of industries, including retail, financial services, insurance, healthcare, media, government, education as well as hospitality and leisure.³⁸ It lists its clients to include Danone, Ebay, eHarmony, the United States Postal Service, Zurich, Auto Trader and Campbells, among others.³⁹

Partnership with Facebook

In 2012, Microstrategy CEO Sanju K. Bansal told a business magazine that Facebook was a customer, and they had collaborated on Wisdom.com. Bansal was quoted as saying:

“Facebook is a customer of Microstrategy, so we do have a good commercial relationship with them, we work with them. We had their CIO speak and keynote our user conference last year in the summer. ... More importantly, the public manifestation of the work we’ve done can be found on Wisdom.com. That’s our application where we pull data from Facebook, we pull fan preferences, fan demographics, fan psychographics. If you wanted to find out anything about anything - you wanted to do a quick survey or a quick poll about what people like and what they’re behavior might be, what age groups like certain things, you can do that very quickly by going to Wisdom.com. In this case, what we’ve done instead of trying to build enterprise technology first, we’ve created a consumer-facing technology using Facebook data, in order to give people a general knowledge app. It just tells you a lot about a lot.”⁴⁰

Microstrategy is indicated to have partnered with Facebook in recent years to develop business intelligence solutions. A YouTube video published in September 2013 shows a presentation given by Guy Bayes, Facebook Head of Enterprise BI, in which he discussed how Microstrategy had developed software capable of presenting information about its 1 billion+ user base.⁴¹ Bayes does not name the software during the course of the presentation, but he could be referring to PRIME (shortened from Parallel Relational In-Memory Engine. Tech news reports published in 2014 stated that the two companies had co-developed the platform, which was described in *Information Week* as “a massively parallel processing engine optimized for and coupled with MicroStrategy’s visualization and dashboard front end”. The article suggested that PRIME could be “... used to help advertisers understand what types of people are interacting with their Facebook content”.

³⁸ <https://www.reuters.com/finance/stocks/companyProfile/MSTR.O>

³⁹ <https://www.Microstrategy.cn/us>

⁴⁰ “The B-side of the Sanju K. Bansal interview,” Washington Business Journal, March 23, 2012.

⁴¹ <https://www.youtube.com/watch?v=vvMNYSo5w00>

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Announcements published by Microstrategy in June 2017 also stated that the company partnered with Facebook the previous year on a “Big Data Analytics” project.⁴² Facebook reportedly engaged Microstrategy “to create and test a new massively-parallel in-memory analytic technology” named EMMA (shortened from Extended MPP Memory Architecture). The software was described as able to analyze just over half of the Facebook dataset in under five seconds.⁴³

Alert

Microstrategy appears to have developed two separate apps under the “Alert” brand name.

1. The subject of this report was created on November 11, 2010, but was disabled following enforcement action taken by Facebook on May 24, 2011 (see below).
2. The other app, released later the same year, appears to have originally been marketed as Alert for Enterprise, but was later simplified to just Alert (see below).

According to press releases, the original Alert app – the lower profile of the two – was a platform for managing Facebook content⁴⁴ and was available as both an iPhone and Android app.⁴⁵ The app allowed users to curate their newsfeed, prioritizing information relating to their interests and favorite topics while still allowing normal Facebook functionality, such as liking and sharing posts or responding to events within the app.⁴⁶

The alert.com domain, which hosted information relating to the subject app, is now inactive; but historical versions of the site were accessed from internet archives. These contain basic descriptions of the app’s functionality. Below is a page published on the site from September 3, 2011 (a dated after the app was disabled):⁴⁷

42 https://community.Microstrategy.com/s/article/Facebook-and-Microstrategy-Partner-for-New-Big-Data-Analytics?language=en_US

43 https://community.Microstrategy.com/s/article/Facebook-and-Microstrategy-Partner-for-New-Big-Data-Analytics?language=en_US

44 <https://www.prnewswire.com/news-releases/Microstrategy-launches-alert-app-allowing-facebook-fans-to-follow-their-favorite-celebrities-and-brands-125400283.html>

45 <https://web.archive.org/web/20111029074943/http://alert.com/features/personalize.html>
<https://www.prnewswire.com/news-releases/Microstrategy-launches-alert-app-allowing-facebook-fans-to-follow-their-favorite-celebrities-and-brands-125400283.html>

46 <https://www.prnewswire.com/news-releases/Microstrategy-launches-alert-app-allowing-facebook-fans-to-follow-their-favorite-celebrities-and-brands-125400283.html>

47 <https://web.archive.org/web/20110903020313/alert.com/>

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The original Alert app has a low public profile, and limited information was uncovered about its activities beyond details of its basic functionality.

Second Alert app

Following the action taken by Facebook against the original Alert app in mid-2011, Microstrategy developed a new app that was originally called Alert for Enterprise, but appears to have been later branded under the Alert name ("Alert 2").⁴⁸ Alert 2 was released in July 2011 and allowed companies to conduct targeted marketing campaigns by adding marketing and commerce features to Facebook business pages. Marketing literature shows that the app included features such as mobile shopping, targeted promotions, loyalty programs and social engagement.⁴⁹ Clients of Alert 2 are indicated to have included Spanish soccer team Barcelona Football club, US retailer Tilly's and US arts and crafts chain A C Moore.⁵⁰

As noted, Alert 2 appears to be a separate platform, and is not the same app as the subject of this report.

Facebook Enforcement against Alert

Facebook records show that Alert was disabled on May 24, 2011 by Niket Biswas, a Facebook software engineer, with the reason listed as "Extended Perm, Uninstall

⁴⁸ <https://www.computerworld.com/article/2510270/enterprise-applications/Microstrategy--gateway--links-facebook-to-enterprise-apps.html>

⁴⁹ http://info2.magento.com/rs/magentosoftware/images/Nirvana_Mehta_Microstrategy_Fitness%20Center_Final.pdf

⁵⁰ <https://ir.Microstrategy.com/news-releases/news-release-details/fc-barcelona-launches-fcb-alert-new-facebook-application>

<https://ir.Microstrategy.com/news-releases/news-release-details/specialty-retailer-tillys-rolls-out-mobile-commerce-app-powered>

<https://ir.Microstrategy.com/news-releases/news-release-details/ac-moore-crafts-mobile-engagement-app-customers-powered>

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Tirggered”. This is believed to relate the app having extended permissions that represented a data privacy concern, although the record requests that parties contact “pops@” for further details.

Emma

Emma was created on March 18, 2011. The app remains active in Facebook records, although it has no active users and no longer appears to be available to the public.⁵¹

Press releases indicate that Emma was officially launched in September 2011. The app provided a classified advert service that incorporated Facebook profile information, enabling users to know more about parties with whom they were engaging.⁵² The app allowed for listings of jobs, real estate and events as well as social options, such as adverts for sports teams and online dating.⁵³

Emma had just over 8,000 authenticated users, a relatively small amount compared to other Microstrategy apps, and does not appear to have gained significant market traction. As noted, the app no longer appears to be operational.

A screenshot of Emma as posted on a user’s Pinterest profile is below:⁵⁴



⁵¹<https://webcache.googleusercontent.com/search?q=cache:plDyoJlDvwMJ:https://community.Microstrategy.com/s/question/0D54400004zXvfOCAS/what-is-Microstrategy-emma+&cd=13&hl=en&ct=clnk&gl=uk>

⁵² <http://themomblogs.com/list-on-emma-the-friendly-marketplace-for-moms-for-a-chance-to-win-a-700-gift-card.shtml>

<https://www.prnewswire.com/news-releases/Microstrategy-launches-emma-providing-a-new-friendly-marketplace-for-facebook-users-129643168.html>

⁵³ <https://www.douban.com/app/20341516/>

<https://www.prnewswire.com/news-releases/Microstrategy-launches-emma-providing-a-new-friendly-marketplace-for-facebook-users-129643168.html>

⁵⁴ <https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwjxyvO-0bPgAhXL8OAKHeOIdIkQjxx6BAgBEAI&url=https%3A%2F%2Fwww.pinterest.com%2Fpin%2F108790147218893477%2F&psig=AOvVaw3wZiOjInTVCSK-JrNgo5v&ust=1549972849290565>

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Loic

Loic was created on February 23, 2011. The app remains active in Facebook records, although has no active users and does not appear to be available to the public.

No material information was uncovered about the app from public domain searches. The app connect URL, <http://www.dev.wisdom.com/>, does not link to any live pages but historical pages from this domain dated through 2011 and 2013 were uncovered in internet archives. The content appears incomplete, but shows a site advertising the services of Wisdom, another of the subjects of this report.⁵⁵ The “dev” in the URL suggests that this app/site may have been used as a test environment for the Wisdom app.

Below is a screenshot of an archived page as it appeared on May 11, 2013.⁵⁶

Personal

Stay on top of Facebook news and views, and get recommendations for entertainment when using Wisdom on web or iPad. Use Wisdom on your iPhone to go to the most popular places with the right crowd.

[Get Wisdom Pages for iPhone »](#)

[Get Wisdom for Web & iPad »](#)

Business

Access the world's most extensive market intelligence network mapping the vast landscape of consumer preferences and activities. Organizations can now get real-time insights into what people like, want, and do.

[Try Wisdom Professional Free »](#)

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Usher

Microstrategy appears to have developed two separate apps under the “Usher” brand name.

1. The subject of this report was created on June 30, 2011 and remains active in Facebook records, although has no active users and no longer appears to be available to the public.
2. The second appears to have been developed in 2012 and has different functionality to the subject (see below).

The subject of this report is indicated to be a platform that allowed users to plan events based around their associations and likes. The app enabled personalized invites to be sent to friends filtered by the app in accordance with a common affiliation or interest based on their Facebook user profile.⁵⁷

⁵⁵ <https://web.archive.org/web/20121101000000/http://www.dev.wisdom.com/>

⁵⁶ <https://web.archive.org/web/20130511020944/http://www.dev.wisdom.com/>

⁵⁷ <http://www.appdropp.com/ios/usher-for-managing-events/477543403>

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The usherevents.com domain, which is listed as the app connect URL, is now inactive; but historical versions of its webpages were uncovered from internet archives. These contain basic descriptions of the app's functionality.

Below is a page published on the site as it appeared on January 19, 2013:⁵⁸



Other 'Usher' software

Microstrategy appears to have developed another app under the "Usher" brand (subsequently referred to as "Usher 2"). Usher 2 was designed for corporate users and is a mobile security platform that replaces traditional forms of enterprise security, such as ID cards, passwords and physical keys, with a mobile badge on a user's handheld electronic device.⁵⁹

As noted, Usher 2 appears to be a separate platform, and is not the same as the subject of this report.

⁵⁸ <https://web.archive.org/web/20130119064431/www.usherevents.com/>

⁵⁹ http://www2.Microstrategy.com/producthelp/10.5/InstallConfig/Content/InstallationConfig/Microstrategy_Usher.htm

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Wisdom

Wisdom was created on April 15, 2011. The app is listed as active in Facebook, but has no active users and does not appear to be available to the public.⁶⁰

Research suggests that when live, the app was available through the Apple App Store and in web-based format on Facebook.⁶¹ Announcements published by Microstrategy at the time of the app's launch stated that Wisdom "organizes Facebook content and provides insights into your Facebook friends." Key features of the app were listed to include:⁶²

- Intelligent Feed – a function that consolidated posts to friends' walls into a single stream, allowing users see posts from other friends and to whom their friends were posting.
- Things to Do – a feature that recommended places and activities to do in the user's location, with recommendations based on the users profile.
- Interests – a function that recommended movies, music, books, TV shows based on a user's Facebook likes and those of their friends.
- Friends Analysis – a feature that converted friend networks into statistics and graphs based on categories, such friends who were most active, most communicative or most popular etc.
- Friend Filter – a function that allowed users to create interest-based friends lists and news feeds.


Screenshots of some of these features were obtained from archived webpages found on the wisdom.com domain (for further information about this domain, see Domain

⁶⁰ <https://web.archive.org/web/20150504124842/http://wisdom.com:80/>

⁶¹ <https://ir.Microstrategy.com/news-releases/news-release-details/Microstrategy-introduces-wisdom-facebook-apps-iphone-ipad>


⁶² <https://ir.Microstrategy.com/news-releases/news-release-details/Microstrategy-introduces-wisdom-facebook-apps-iphone-ipad>

Registration Information section). These particular images come from the site as it appeared on May 21 2011, around the time of the app's launch.⁶³



What is Wisdom?

Your privacy rights




Capture the Wisdom of Your Social Network

Life is short—stay on top of what's important. Sorting through everything you get on Facebook in a day can take hours. Wisdom automatically organizes Facebook content so you don't have to. Get extraordinary insights in seconds from your Facebook network. And it's free!


Install the App >

Powered by WisdomStream



Feed

What's popular, who's happy, who's available, and more! Your friend's father died, your second cousin had a baby, your ex is engaged – Wisdom lets you see what's important based on what your friends think. Plus, it's 30 days of info, instead of the usual 3-day News feed limit. A ton of posts in the same place, each one clickable to full details. Plus, a quick way to filter the list and view by your own friend lists. With helpful categories like Romance, Health, and Travel – so you don't miss any important news.



Interests

The best movies, music, books, TV shows, restaurants/bars, and more – all based on "likes" from your network. And not just what's popular now, but what's trending up or down. Breakouts by age, gender, and relationship status help you relate even better. Learn from your friends and stay in the know!

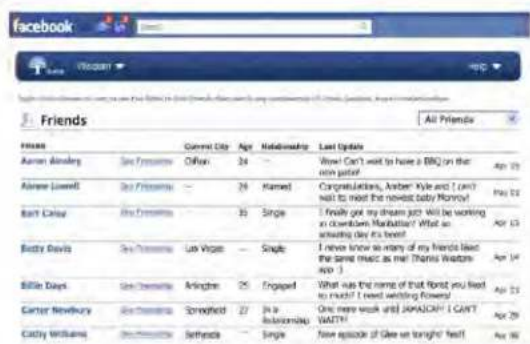
63 <https://web.archive.org/web/20110510234033/http://www.wisdom.com:80/>
<https://web.archive.org/web/20110521190553/http://wisdom.com:80/what-is-wisdom>

83

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FB-CA-MDL-02630311

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Friends

All of your friends and their last status update in one convenient list. Giving you a chance to check-in quickly on everyone without being inundated by that one friend who over-posts! And with an easy filter on age, gender, relationship status, and location, you can scan the list even faster.

FriendFilter™

Featured throughout the app, the FriendFilter lets you view your data any way you like! You already have the ability to make friend lists in Facebook, but now you can quickly create a custom friend segment on the fly based on location, gender, age, and relationship status. Manual friend lists are never complete and get outdated in weeks, but with FriendFilter, your friend lists are dynamic and flexible. A friend just moved to NYC? Wisdom's FriendFilter automatically makes the change for you, so when you're pulling into town, you can instantly check out what's going on with all friends there. Better yet, filter on the fly for single NYC friends your age.



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By early 2012, Microstrategy was promoting the “collective intelligence” features of Wisdom at www.wisdom.com, stating that “Wisdom for Facebook is a free collective intelligence application that gives you an unprecedented level of insight derived from the social graph of the Wisdom Network or your own. Wisdom is powered by the knowledge of millions of users.”

These statements are shown in the screen capture below.⁶⁴

Wisdom™ Home Take a tour Election 2012 Blog Your privacy rights

Wisdom™ Has Just Become Smarter

Welcome to one of the most powerful collective intelligence applications ever created. Now Wisdom™ allows users to gain insight and discover trends derived from the Wisdom Network or their own. Posted and anonymized, your personal information is never revealed, but the knowledge is captured and available for all.

And as more users join the Wisdom Network, the smarter the application gets, so too your friends!

[Go to the App >](#) [Available on the App Store](#)

Collective Intelligence

Tap into the Wisdom of the Masses and harness the power of the Wisdom Network. The world's largest focus group, Facebook, is the biggest database of people's likes, interests, and opinions. Wisdom allows you to dive into the Social Graph to discover peoples' preferences based on their actual "likes" and sit behind the controls of one of the most powerful recommendation engines ever built.

You can even use Wisdom to compare audience segments or brands derived from user "likes" and profiles, such as Democrats or Republicans, or Amazon vs. Walmart. By comparing like-preferences, Wisdom is like having your own polling agency.

[Available only for iOS](#)

Page Comparison

Page	Rank	No. Likes	Page	Rank	No. Likes	Page	Rank	No. Likes
Obama	1	1000000	Obama	1	1000000	Obama	1	1000000
Michelle Obama	2	500000	Michelle Obama	2	500000	Michelle Obama	2	500000
Barack Obama	3	400000	Barack Obama	3	400000	Barack Obama	3	400000
Michelle Obama	4	300000	Michelle Obama	4	300000	Michelle Obama	4	300000
Barack Obama	5	200000	Barack Obama	5	200000	Barack Obama	5	200000
Michelle Obama	6	150000	Michelle Obama	6	150000	Michelle Obama	6	150000
Barack Obama	7	100000	Barack Obama	7	100000	Barack Obama	7	100000
Michelle Obama	8	80000	Michelle Obama	8	80000	Michelle Obama	8	80000
Barack Obama	9	60000	Barack Obama	9	60000	Barack Obama	9	60000
Michelle Obama	10	50000	Michelle Obama	10	50000	Michelle Obama	10	50000

⁶⁴ <https://web.archive.org/web/20120328064453/http://www.wisdom.com/>
<https://web.archive.org/web/20120328064448/http://www.wisdom.com/what-is-wisdom/>

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Microstrategy was also promoting Wisdom for insights and intelligence about the 2012 U.S. presidential election.⁶⁵



By December 2012/January 2013, the Wisdom website offered a link to Wisdom Professional, which purportedly provided “Exceptional Consumer Insights and Market Research Using Facebook Data” (emphasis added). Microstrategy also claimed in accompanying product materials that Wisdom “is revolutionizing the way organizations navigate consumer landscapes, political landscapes, and social landscapes. Every business leader, politician, and investor operating without **this map of the human landscape** will be operating blind. Every organization using the Wisdom network will have a panoramic view of what people like, want, and do.” See the full

⁶⁵ <https://web.archive.org/web/20120328064830/http://www.wisdom.com/election/>

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screen capture below.⁶⁶ Additional information about Wisdom Professional is provided in the next section of this report.



Wisdom PROFESSIONAL™

MICROSTRATEGY WISDOM IS THE WORLD'S MOST EXTENSIVE MARKET INTELLIGENCE NETWORK. For the first time in history, enough data exists in social networks such as Facebook and Twitter, in reference networks like Wikipedia, in product networks like Amazon and Apple, in mapping networks such as Google, and in government networks like the census, to assemble the most extensive network of people and their connections to every product, place, celebrity, interest, and activity in the world. Wisdom is that market intelligence network.

Just as Google Maps revolutionized the way people navigate the physical world, Wisdom is revolutionizing the way organizations navigate consumer landscapes, political landscapes, and social landscapes. Every business leader, politician, and investor operating without this map of the human landscape will be operating blind. Every organization using the Wisdom network will have a panoramic view of what people like, want, and do.

WHY IS WISDOM UNIQUE?

INSIGHTS DERIVED FROM BIG DATA CLOUD NETWORKS

Wisdom can explore the full landscape of data about the demographics, interests, activities, and preferences of many millions of people. Wisdom enriches the vast extent of a person's Facebook profile with location data from Google and Apple, estimates income information using census data and other public sources, infers interest and activity preferences using Facebook and Wikipedia, and assigns psychographic groups, providing a complete view of the individual.

CONSTANTLY EVOLVING NETWORK

The Wisdom Network acquires thousands of new people every day, making Wisdom insights richer and more valuable by the day. With the millions of people in Wisdom avidly liking new pages on Facebook, checking-in to new places, engaging with friends and brands, signing up for events and reporting life changes, Wisdom provides an unmatched opportunity to discover new insights every day.

FASTEST TIME TO INSIGHT

Wisdom measures preferences in real-time, finding answers to questions not available in published research or those that survey panels take months to answer. An increasingly dynamic marketing world demands the ability to ask a series of questions about the market, where each question is fueled by the insights gleaned from the previous one.

POWERFUL SEGMENTATION AT YOUR FINGERTIPS

Wisdom provides the ability to investigate any group or micro-group of people using a powerful segmentation engine. Organizations can select any combination of demographic attributes, psychographic factors, interests, or social ratings to create a segment resulting in virtually endless possibilities in which the preference landscape can be explored.

COMPLEX TECHNOLOGY MADE POWERFULLY SIMPLE

Wisdom runs on MicroStrategy's acclaimed business intelligence analytic platform leveraging its unique interactive capabilities to provide deeper insight and speed-of-thought analytics without requiring any training.

WHO SHOULD USE WISDOM?

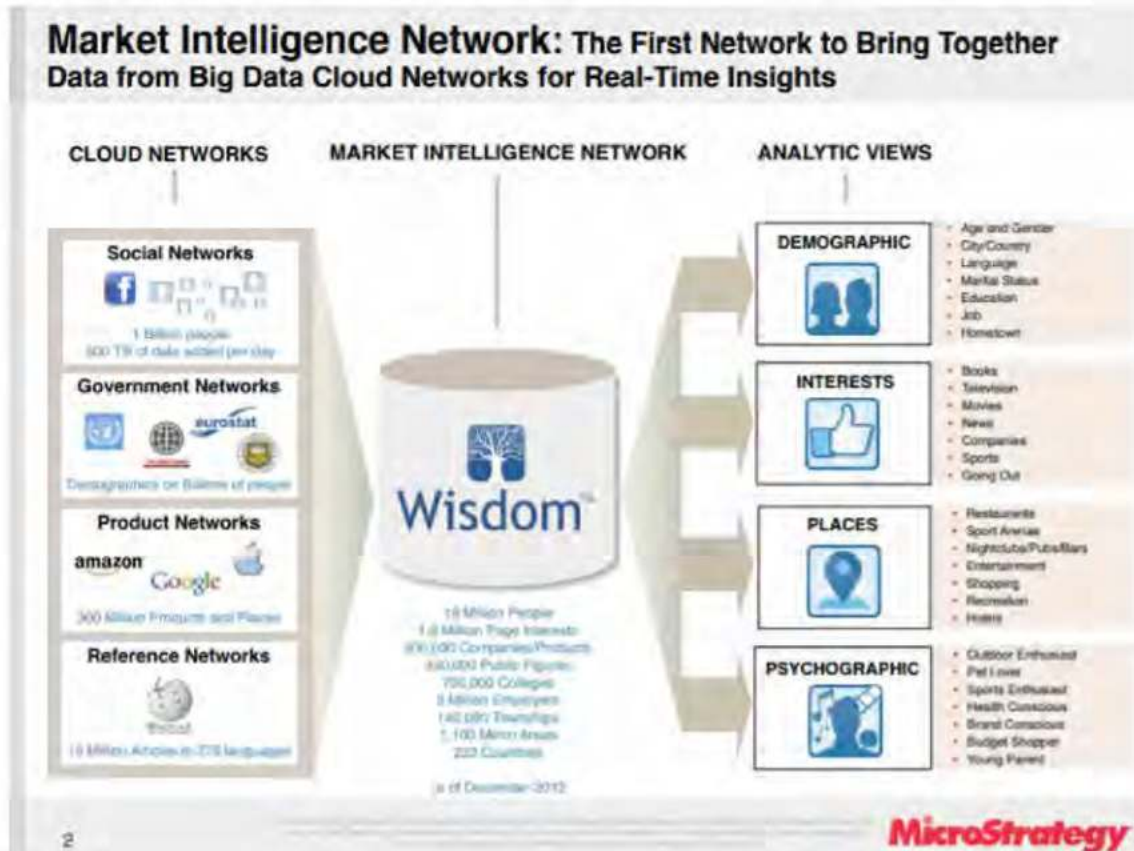
Whether you work in marketing, research, government, or product development and use analytics on behavior and preferences of people, Wisdom can provide you with valuable and compelling insights for day-to-day decision making.

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> • CONSUMER RESEARCHERS • POLITICAL CAMPAIGNS | <ul style="list-style-type: none"> • MARKETING DEPARTMENTS • GOVERNMENTS | <ul style="list-style-type: none"> • ADVERTISING AGENCIES • CELEBRITIES AND PUBLIC FIGURES |
|---|--|--|

⁶⁶ https://web.archive.org/web/20130120064118/http://www.microstrategy.com/download/files/social-intelligence/Wisdom_Product_Sheet.pdf

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Microstrategy's website also offered a presentation about Wisdom and its "Market Intelligence Network." In it, the company outlined how they were bringing together not only data from multiple networks — including social networks like Facebook — but also "government" networks and product networks like Amazon, as shown in the screen capture below.⁶⁷



In SEC filings, Microstrategy stated that Wisdom enriched Facebook profile information with location data and income estimates.⁶⁸ According to company filings (emphasis added):

"Key benefits of MicroStrategy Wisdom include:

- Insights derived from big data cloud networks.** Wisdom can explore the broad landscape of data of the demographics, interests, activities, and preferences of many millions of people. **Wisdom enriches Facebook profile information with location data, estimates income information using census data and other public sources, infers interest and activity preferences using Facebook and Wikipedia, and assigns users to psychographic groups.***
- Constantly evolving network.** Wisdom acquires information about thousands of new profiles every day, making Wisdom insights richer and more valuable by the*

⁶⁷ https://web.archive.org/web/20130120064034/http://www.microstrategy.com/download/files/social-intelligence/Wisdom_Executive_Presentation.pdf

⁶⁸ <https://www.sec.gov/Archives/edgar/data/1050446/000119312513055763/d448003d10k.htm>

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day. With millions of people that are part of the Wisdom dataset avidly liking new pages on Facebook, checking into new places, engaging with friends and brands, signing up for events, and reporting life changes, Wisdom provides a powerful opportunity to discover new market insights every day.

- ***Faster time to insight.** Wisdom finds answers to questions not readily available in published research or those that survey panels take months to answer. An increasingly dynamic marketing world demands the ability to ask a series of questions about the market, where each question is fueled by the insights gleaned from the last one.*
- ***Powerful segmentation at your fingertips.** Wisdom provides the ability to analyze groups or micro-groups of people using a powerful segmentation engine. Organizations can select any combination of demographic attributes, psychographic factors, interests, or social ratings in Wisdom to create a segment, resulting in virtually endless possibilities in which the preference landscape can be explored.*
- ***Complex technology made powerfully simple.** Wisdom runs on MicroStrategy's Business Intelligence analytic platform leveraging its unique interactive capabilities to provide deeper insight and speed-of-thought analytics without requiring training."*⁶⁹

Microstrategy also stated in SEC filings that the company aggregates data from Facebook with other data sources.

***"New sources of data.** The Wisdom network already collects and combines data from Facebook, Wikipedia, Google, Apple, government sources, and other sources. We continue to explore and research the addition of other data sources that will make Wisdom intelligence even more insightful and actionable. These data sources can span the gamut of other social network data, publicly available data, commercially available data, and customer data sources."*⁷⁰

⁶⁹ <https://www.sec.gov/Archives/edgar/data/1050446/000119312513055763/d448003d10k.htm>

⁷⁰ <https://www.sec.gov/Archives/edgar/data/1050446/000119312513055763/d448003d10k.htm>

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By December 2013 through April 2015, Wisdom’s website showed that Microstrategy was offering “Wisdom Places” — a way to discover popular bars and nightclubs — as well as versions of Wisdom for personal and business use, as shown below.⁷¹



But in mid-to-late 2015, website archives for Wisdom.com indicate that traffic to Wisdom.com was being redirected to Microstrategy.com.⁷²



71 https://web.archive.org/web/20131221101225/http://wisdom.com/

72 https://web.archive.org/web/20150907175815/http://www.microstrategy.com/us

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Wisdom Professional

In July 2012, approximately one year after Wisdom launched, Microstrategy next launched a professional version (**Wisdom Professional**) which, according to a press release “provide[d] businesses with unique intelligence on the demographics, interests and social graph of more than **12 million anonymous, opted-in Facebook users**”.⁷³

Facebook records confirmed that Wisdom Professional is a separate from this report’s subject app. Several similarly named apps have been registered on Facebook:

- Two Facebook apps are registered as “**Wisdom Professional**”
 - App ID 186800148121351
 - App ID 135098573332625
- **Windows Professional Test** (App ID 116864018498733).

The Wisdom Professional app let businesses geo-target fans, gauge interest on brands, compare various brands and perform other methods of audience research using the data collected from the Wisdom network. In 2012, a Wisdom Professional license — which allows full functionality and access to the Wisdom data set — cost USD \$25,000 annually.⁷⁴ According to a press release:

*Microstrategy Wisdom Professional is an analytical application that can explore the **full spectrum of personal data contained in Facebook about consumers, including their demographics, interests, activities and preferences.***⁷⁵

⁷³ <https://ir.Microstrategy.com/news-releases/news-release-details/Microstrategy-launches-wisdom-professional-innovative-consumer>

⁷⁴ <https://www.slideshare.net/demandmetric/vendor-profile-wisdom-by-Microstrategy>

⁷⁵ <https://ir.Microstrategy.com/news-releases/news-release-details/Microstrategy-launches-wisdom-professional-innovative-consumer>

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Below is a screen capture of the Interests tab in Wisdom Professional, based on a study of the app performed by Elham Fayezioghani and Vanhoof Koen.⁷⁶



Figure (2): A snapshot of Interests tab in Wisdom Professional

Microstrategy provided documentation for Wisdom Professional, which was available as an appendix to academic research publications online.⁷⁷

Wisdom and Gateway for Facebook

In its first year of operation, the Wisdom platform is indicated to have been supported by a Microstrategy platform called Gateway for Facebook, which was launched in 2011. Press reports at the time reported that it was a cloud-based service that connected businesses to data gathered from Facebook.⁷⁸ Gateway is not itself indicated to have been an app, but appears to have been technology that enabled third-party apps to gather Facebook data.

Gateway's activities were not the subject of significant press scrutiny beyond reports surrounding its launch. But further details about its activities were uncovered in the Microstrategy 2011 annual report, which stated:

Gateway provides high-capacity connectivity between enterprise IT environments and Facebook's social graph using Facebook's open APIs. Gateway provides Facebook connectivity to Facebook-compatible applications that have acquired the permission from their users to access their Facebook data. Gateway can simplify the data access operations of Facebook-compatible applications by allowing Facebook data to be stored in a relational format, which is often more familiar to IT professionals and is more compatible with

⁷⁶ <http://www.foibg.com/ijita/vol21/ijita21-01-p01.pdf>

⁷⁷ <https://www.itweekly.nl/iec/ms/WisdomProfessionalDocumentation.pdf>

https://www.researchgate.net/publication/283326830_wisdom-professional-documentation

⁷⁸ <https://readwrite.com/2011/07/14/microstrategy-gateway-connects/>

<https://www.cio.com/article/2406308/enterprise-software/microstrategy-gateway-links-facebook-to-enterprise-apps.html>

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enterprise IT policies and procedures. Data retrieved and relationalized by Gateway can also support a wide range of rich analytical queries characteristic of relational databases, thus helping enterprises to build “smarter” Facebook applications. MicroStrategy Gateway for Facebook was released in July 2011.

The data gathered by Gateway is described later in the same report as feeding into Wisdom. It stated:⁷⁹

MicroStrategy Wisdom is an analytic application built on MicroStrategy’s BI Platform that owners of Facebook-compatible applications can use to segment and analyze their Facebook application user populations. Wisdom takes data retrieved using Gateway technology, converts it into a data warehouse format, and provides analytic dashboards to analyze the data.

The platform is not mentioned in subsequent annual reports issued by Microstrategy, although is referenced in a press release from January 2012, which stated that clothing brand Guess? Inc had employed Gateway and Wisdom to create a mobile app for Guess List, the company’s customer loyalty program.⁸⁰

Fate of Wisdom apps

The Wisdom apps are no longer part of the Microstrategy service line. Investigations were unable to determine exactly what happened to them or to the Facebook user data gathered by the apps. Information published by the company indicates that Wisdom was removed from its suite of offerings at some point between 2012 and 2013/2014/2015.

The last reference to Wisdom by Microstrategy in its annual reports featured in the 2012 edition, although wisdom.com appears to have been maintained through 2014. The report listed the company to operate seven business lines at the time, comprising:⁸¹

- MicroStrategy Business Intelligence Platform
- MicroStrategy Mobile Platform
- MicroStrategy Cloud
- MicroStrategy Express
- MicroStrategy Wisdom

⁷⁹ <https://ir.microstrategy.com/static-files/192fe408-9778-47cb-8ea6-781e9a5751a0>

⁸⁰ <https://ir.microstrategy.com/news-releases/news-release-details/microstrategy-recognizes-excellence-enterprise-class-business-0>

⁸¹ <https://ir.microstrategy.com/static-files/d2ee6452-3625-4e99-b684-1c9106706932>

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- MicroStrategy Alert
- MicroStrategy Usher

A section of the company's annual report entitled "MicroStrategy Wisdom Technology Strategy" discussed future plans for developing the Wisdom platform:

We continue to explore and research the addition of other data sources that will make Wisdom intelligence even more insightful and actionable. These data sources can span the gamut of other social network data, publicly available data, commercially available data, and customer data sources...

... we continue to improve our data enrichment algorithms that combine different sets of data, our analytic measures that provide more insight, and our data normalization algorithms that allow our dataset to more accurately represent actual populations...

... We are exploring new ways to provide broader and deeper analytics from the Wisdom data. This involves generating new views of data, providing more sophisticated analytics, and enabling more means of segmentation.

But by the time the 2013 annual report was published, the number of Microstrategy service lines had reduced to five — and Wisdom was not listed among them:

1. MicroStrategy Analytics Platform
2. MicroStrategy Mobile
3. MicroStrategy Cloud
4. MicroStrategy Loyalty Platform
(branded to the market as MicroStrategy Alert)
5. MicroStrategy Identity Platform
(branded to the market as MicroStrategy Usher)

None of the above appears to obviously replicate or build upon the Wisdom platform. Furthermore, no reference was made elsewhere in the 2013 annual report to the app or to services that relied upon the collection of Facebook data.

The last reference uncovered to Wisdom in corporate literature published by Microstrategy was found in a press release published in October 2012 entitled "Who Really 'Likes' Romney? Who Really 'Likes' Obama? Wisdom™ Knows!" The release claimed that Wisdom could be used to discern important information about voters in the 2012 presidential election.⁸²

⁸² <https://ir.microstrategy.com/news-releases/news-release-details/who-really-likes-romney-who-really-likes-obama-wisdomtm-knows>

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Notably, Microstrategy appears to have stopped promoting Wisdom around the same time that the company entered into a partnership with Facebook — developing the PRIME data analytics platform (see above). This partnership may have impacted Microstrategy's other activities involving processing Facebook data.

An obvious concern relating to the winding down of the Wisdom business is how data gathered by the app was subsequently used. Research was unable to provide a conclusive answer to this, and so questions have been asked as part of the RFI to try and determine this.

WIT

WIT was created on October 31, 2011. The app remains active in Facebook records, although has no active users and does not appear to be available to the public.

The app appears to be a test version of Wisdom, as is suggested by its name. It is noted that the original Wisdom app was created six months before WIT, which indicates that the latter was set up as an environment in which to test new app features

No reference was uncovered to the app's activities outside Facebook records.

Management

The executive officers of Microstrategy are identified below.⁸³

- **Michael J. Saylor** has served as Chief Executive Officer and Chairman of the Board of Directors since founding Microstrategy in November 1989, and has served as President since January 2016, a position he previously held from November 1989 to November 2000 and from January 2005 to October 2012. Prior to that, Saylor was employed by E.I. du Pont de Nemours & Company as a venture manager from 1988 to 1989 and by Federal Group, Inc. as a consultant from 1987 to 1988. Saylor received an S.B. in Aeronautics and Astronautics and an S.B. in Science, Technology and Society from the Massachusetts Institute of Technology, according to SEC filings.
- **Phong Q. Le** has served as Senior Executive Vice President & Chief Financial Officer since August 2015. Prior to joining Microstrategy, Le served as the chief financial officer of XO Communications, a privately-held telecommunications company, from August 2014 to August 2015. From March 2010 to August 2014, Le held senior positions at NII Holdings, a Nasdaq-listed telecommunications company, including vice president of financial planning and analysis, vice president of strategy and business operations and vice president of strategic finance. Prior to that, Le worked in the consulting practice at Deloitte from

⁸³ <https://ir.Microstrategy.com/corporate-governance/management>
<https://www.sec.gov/Archives/edgar/data/1050446/000119312518122667/d568394ddef14a.htm>

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1998 to 2010, where he held various positions, including senior manager. Le holds a B.S. in Biomedical Engineering from The Johns Hopkins University and a M.B.A. from the Sloan School of Management at the Massachusetts Institute of Technology, according to SEC filings.

- **Stephen H. Holdridge** has served as Senior Executive Vice President, Worldwide Services since November 2017. Prior to joining Microstrategy, Holdridge served as senior vice president, consulting, Americas for Infor, Inc. (f/k/a Infor Global Solutions), a privately-held enterprise software company, from May 2012 to November 2017. From June 1997 to May 2012, Holdridge held senior consulting positions at Oracle Corporation, an NYSE-listed software company, including group vice president and general manager, government, education and healthcare consulting. Prior to that, Holdridge served as senior manager of the management consulting services division at Price Waterhouse LLP (now PricewaterhouseCoopers LLP) and as vice president, services and development at BIS Computer Solutions. Holdridge holds a B.S. in Business Administration from California Polytechnic State University, according to SEC filings.
- **Timothy E. Lang** has served as Senior Executive Vice President & Chief Technology Officer since November 2014 and previously served as Senior Vice President, Analytics, a position he had held since September 2014. Prior to joining Microstrategy, Lang served as the chief product officer for Talemtry Inc., a leading provider of talent generation SaaS solutions, from September 2010 to September 2014, and as vice president, product for SAP SE from January 2008 to September 2010. Prior to that, Lang held positions at SAP BusinessObjects and Crystal Decisions. Lang received a B.Soc.Sci. in Information Management from the University of Melbourne, according to SEC filings.
- **Kevin Norlin** has served as Senior Executive Vice President, Worldwide Sales since April 2018. Prior to joining Microstrategy, Norlin served as senior vice president, global sales, financial services for NCR Corporation, a publicly-traded technology company, from August 2017 to March 2018. Prior to NCR, Norlin worked at Hewlett Packard Enterprise, where he served as vice president and general manager, worldwide sales, operations and strategy from April 2016 to February 2017. From October 2012 to February 2016, Norlin held various senior positions at Dell Software Group, including vice president and general manager, Americas and EMEA. Norlin received a B.A. from Louisiana State University, according to SEC filings.
- **W. Ming Shao** has served as Senior Executive Vice President & General Counsel since December 2014, and has previously served in other senior positions, including Executive Vice President & General Counsel, Senior Vice President &

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General Counsel and Senior Vice President & Deputy General Counsel, since joining Microstrategy in February 2000. Prior to that, Shao was a lawyer practicing at the global law firm Hogan & Hartson L.L.P. (now Hogan Lovells US LLP). Shao received an A.B. in Government from Cornell University and a J.D. from Harvard Law School, according to SEC filings.

Parent Entity

The six subject apps were all developed by Microstrategy. The company's most recent annual report does not include a comprehensive list of its shareholders,⁸⁴ but an April 2018 notice issued to shareholders detailed the company's then-current ownership structure.⁸⁵ It showed that the company issued two types of shares, Class A and Class B, which grant different levels of "economic interest" and "voting power."

- **Class A Stock.** The largest shareholders of Class A Stock are institutional shareholders Blackrock Inc (15.2%), the Vanguard Group Inc (9.5%) and Eminence Capital LP (8.1%) — with those firms holding 12.5%, 7.8% and 6.6% economic interest and 4.8%, 3% and 2.6% voting power in the company, respectively.
- **Class B Stock.** The largest shareholder of Class B stock is Chairman and CEO Michael J Saylor (98.8%), which gives him 20.4% control of the company's economic interest and 68% of the voting power.⁸⁶

Domain Registration Information

Below is an overview of registration information for the Wisdom group domains:

⁸⁴ https://ir.Microstrategy.com/financial-information/sec-filings?field_nir_sec_form_group_target_id%5B%5D=471&field_nir_sec_date_filed_value=&items_per_page=10#vi-ews-exposed-form-widget-sec-filings-table

⁸⁵ <https://ir.microstrategy.com/static-files/5c894cb9-dd92-4621-a7fc-f4bfd9e87d9a>

⁸⁶ <https://ir.microstrategy.com/static-files/5c894cb9-dd92-4621-a7fc-f4bfd9e87d9a>

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App	App ID	Domain/s
Alert	155018221207734	alert.com staging.alert.com api.alert.com
Emma	100158893401448	emma.com api.emma.com www.emma.com
LoicFB	153729021352139	dev.wisdom.com www.wisdom.com wisdom.com
Usher	238063252871825	usherevents.com www.Microstrategy.com usherevents.com
Wisdom	155202421210030	wisdom.com www.wisdom.com
WIT ⁸⁷	184999731582487	wisdom.com

Alert

Alert is associated with alert.com, which has the following registration information:

Domain Name:	alert.com
Registry Domain ID:	2931487_DOMAIN_COM-VRSN
Registrar WHOIS Server:	whois.corporatedomains.com
Registrar URL:	www.cscprotectsbrands.com
Updated Date:	2019-01-01T06:39:28Z

⁸⁷ No app connect URL is listed in connection to WIT in Facebook records, although wisdom.com is listed as an associated domain.

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Domain Name:	alert.com
Creation Date:	1999-01-05T05:00:00Z
Registrar Registration Expiration Date:	2020-01-05T05:00:00Z
Registrar:	CSC CORPORATE DOMAINS, INC.
Sponsoring Registrar IANA ID:	299
Registrar Abuse Contact Email:	domainabuse@cscglobal.com
Registrar Abuse Contact Phone:	+1.8887802723
Domain Status:	clientTransferProhibited http://www.icann.org/epp#clientTransferProhibited
Registrant Name:	Microstrategy, Inc.
Registrant Email:	dns_admin@Microstrategy.com
Admin Name:	Microstrategy, Inc.
Admin Email:	dns_admin@Microstrategy.com
Tech Name:	DNS Administrator
Tech Email:	dns-admin@cscglobal.com
Name Server:	a11-67.akam.net
Name Server:	a4-66.akam.net
Name Server:	a14-64.akam.net
Name Server:	a16-65.akam.net
Name Server:	a1-228.akam.net
Name Server:	a7-67.akam.net
DNSSEC:	unsigned

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Emma

Emma is associated with the domain, emma.com, which has the following domain registration information:

Domain Name:	emma.com
Registrar WHOIS Server:	whois.corporatedomains.com
Registrar URL:	www.cscprotectsbrands.com
Updated Date:	2018-11-29T06:54:24Z
Creation Date:	1992-12-04T05:00:00Z
Registrar Registration Expiration Date:	2019-12-03T05:00:00Z
Registrar IANA ID:	299
Abuse Contact Email:	domainabuse@cscglobal.com
Domain Abuse Contact Phone:	+1.8887802723
Domain Status:	clientTransferProhibited http://www.icann.org/epp#clientTransferProhibited
Registry Registrant ID:	Unknown
Registrant Name:	Microstrategy, Inc.
Registrant Street:	1850 Towers Crescent Plaza
Registrant City:	Tysons Corner
Registrant State:	VA
Registrant Country:	US
Name Server:	a4-66.akam.net a14-64.akam.net a1-228.akam.net a16-65.akam.net

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Domain Name:	emma.com
	a11-67.akam.net
	a7-67.akam.net
DNSSEC:	Unsigned

Loic

Loic is associated with the domain, [dev.wisdom.com](#), which is a subdomain of [wisdom.com](#). Domain registration is included as part of the corresponding Wisdom section below.

Usher

Usher is associated with the domain, [usherevents.com](#), which has the following domain registration information:

Domain Name:	usherevents.com
Registrar WHOIS Server:	whois.corporatedomains.com
Registrar URL:	www.cscprotectsbrands.com
Updated Date:	2018-10-28T05:18:38Z
Creation Date:	2012-11-01T19:50:42Z
Registrar Registration Expiration Date:	2019-11-01T19:50:41Z
Registrar IANA ID:	299
Abuse Contact Email:	domainabuse@cscglobal.com
Domain Abuse Contact Phone:	+1.8887802723
Domain Status:	clientTransferProhibited http://www.icann.org/epp#clientTransferProhibited
Registry Registrant ID:	Unknown

Privileged and Confidential – A/C Privileged – Attorney Work Product

Domain Name:	usherevents.com
Registrant Name:	Microstrategy, Inc.
Registrant Street:	1850 Towers Crescent Plaza
Registrant City:	Tysons Corner
Registrant State:	VA
Registrant Country:	US
Tech Name:	DNS Administrator
Tech Organization:	CSC Corporate Domains, Inc.
Tech Street:	251 Little Falls Drive
Tech City:	Wilmington
Tech State:	DE
Tech Phone:	+1.3026365400
Name Server:	a1-228.akam.net
	a11-67.akam.net
	a14-64.akam.net
	a7-67.akam.net
	a16-65.akam.net
	a4-66.akam.net

Wisdom and WIT

Wisdom and WIT, along with Loic, are both associated with the domain, [wisdom.com](https://www.wisdom.com), which has the following domain registration information:

Domain Name:	wisdom.com
Registry Domain ID:	56876_DOMAIN_COM-VRSN
Registrar WHOIS Server:	whois.corporatedomains.com

Privileged and Confidential -- A/C Privileged -- Attorney Work Product

Domain Name:	wisdom.com
Registrar URL:	www.cscprotectsbrands.com
Updated Date:	2018-02-25T06:21:10Z
Creation Date:	1995-02-28T05:00:00Z
Registrar Registration Expiration Date:	2019-03-01T05:00:00Z
Registrar:	CSC CORPORATE DOMAINS, INC.
Registrar IANA ID:	299
Registrar Abuse Contact Email:	domainabuse@cscglobal.com
Registrar Abuse Contact Phone:	+1.8887802723
Domain Status:	clientTransferProhibited http://www.icann.org/epp#clientTransferProhibited
Registry Registrant ID:	
Registrant Name:	Microstrategy, Inc.
Registrant Organization:	Microstrategy, Inc.
Registrant Street:	1850 Towers Crescent Plaza
Registrant City:	Tysons Corner
Registrant State/Province:	VA
Registrant Postal Code:	22182
Registrant Country:	US
Registrant Phone:	+1.7038488600
Registrant Phone Ext:	
Registrant Fax:	+1.7036103889

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Domain Name:	wisdom.com
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Registrant Fax Ext:

Registrant Email: dns_admin@Microstrategy.com

Registry Admin ID:

Admin Name:	Microstrategy, Inc.
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Admin Organization:	Microstrategy, Inc.
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Admin Street:	1850 Towers Crescent Plaza
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Admin City:	Tysons Corner
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Admin State/Province:	VA
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Admin Postal Code:	22182
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Admin Country:	US
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Admin Phone:	+1.7038488600
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Admin Phone Ext:

Admin Fax:	+1.7036103889
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Admin Fax Ext:

Admin Email:	dns_admin@Microstrategy.com
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Registry Tech ID:

Tech Name:	DNS Administrator
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Tech Organization:	CSC Corporate Domains, Inc.
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Tech Street:	251 Little Falls Drive
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Tech City:	Wilmington
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Tech State/Province:	DE
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Tech Postal Code:	19808
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Privileged and Confidential – A/C Privileged – Attorney Work Product

Domain Name:	wisdom.com
Tech Country:	US
Tech Phone:	+1.3026365400
Tech Phone Ext:	
Tech Fax:	+1.3026365454
Tech Fax Ext:	
Tech Email:	dns-admin@cscglobal.com
Name Server:	a14-64.akam.net
Name Server:	a1-228.akam.net
Name Server:	a16-65.akam.net
Name Server:	a11-67.akam.net
Name Server:	a4-66.akam.net
Name Server:	a7-67.akam.net
DNSSEC:	unsigned

Provided Email Addresses

Open-source research was performed on key email addresses associated with the six subject apps, including the app contact email, the alternative contact email and the app creator email. Summaries of the findings are included in the table below:

App	Email	Notes
Alert	support@alert.com (app contact and alternate email)	The address appears to be a support email for Alert. It is listed in connection to the app on the app’s privacy policy. ⁸⁸

88 <https://www.Microstrategy.com/us/legal/legal-documents/alert-privacy-policy.pdf>

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App	Email	Notes
	<div>Redacted - PII</div> (app creator)	The email belongs to Diego Valenzuela. His LinkedIn profile suggests that he worked for Microstrategy between 2008 and 2014, ultimately holding the position of Principal Software Engineer. He currently works as a Senior Software Engineer at GoCanvas, a company based in Reston, VA that develops data-sharing solutions for corporate clients. He has held this role since February 2016. ⁸⁹
EMMA	support@emma.com (app contact and alternate email)	The email has no discernible public profile, but is indicated to have served as a support email for the EMMA app.
	hungle@live.com (app creator)	<p>The only reference uncovered to the email was on a Vietnamese chatroom discussing the computer game Assassin's Creed. The email is listed among a large number of other email contacts, although no meaningful insight was provided about its owner.⁹⁰</p> <p>Loic Fabro (see below) was identified to hold a patent for software titled "Determining Popular Venues". The other registrant is a Thuy Le. It is unclear if this is the same individual connected to live.com email.</p>
LFA	<div>Redacted - PII</div> (app creator, contact and alternate email)	The address is indicated to belong to Loic Fabro, who currently serves as the Director of Product Management at Microstrategy. According to his LinkedIn profile, he has worked at the company since 2000. ⁹¹

89 <https://www.linkedin.com/in/diegovalenzuela/>

90 <http://neei.info/threads/49664-Share-Game-Assasins-Creed-Beta/page73.html?styleid=4>

91 <https://www.linkedin.com/in/loicfabro/>

<https://www.facebook.com/loic.fabro>

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App	Email	Notes
UME	<div>Redacted - PII</div> (app creator and contact email)	The email belongs to Hector Vazquez. According to his LinkedIn profile, he worked for Microstrategy for over 17 years, between 1999 and 2016. His final role was as VP Product Area Owner. He is currently VP of Solutions at Data Meaning, a company based in Coral Springs also involved in developing business intelligence solutions. ⁹²
	support@usherevents.com (app alternate email)	The email has no discernible public profile, but is indicated to have served as a support email for the UME app.
Wisdom	support@wisdom.com (app contact and alternate email)	The email has no discernible public profile, but is indicated to have served as a support email for the Wisdom app.
	hungle@live.com (app creator)	See EMMA
WIT	<div>Redacted - PII</div> (app creator and contact email) ⁹³	See LFA

Additional Contact Information

Microstrategy provides the following contact information within its privacy policy, which may be the best point of contact if an RFI is issued:⁹⁴

privacy@Microstrategy.com

Attn: Office of the General Counsel
Microstrategy Incorporated
1850 Towers Crescent Plaza
Tysons Corner, Virginia 22182

92 <https://www.linkedin.com/in/hvazquez/>

93 No alternate email provided

94 <https://www.Microstrategy.com/us/legal-folder/privacy-policy>

Privileged and Confidential – A/C Privileged – Attorney Work Product

This contact information is similar to that provided in Wisdom's 2012 privacy policy.

support@wisdom.com
703-744-6529
Microstrategy Enterprises, Inc.
1850 Towers Crescent Plaza,
Vienna, Virginia 22182,
Attn: Office of the General Counsel

4 Corporate Registry Information

Corporate registration information for Microstrategy, the parent company of the subject apps, is provided below:

- Entity Name:** Microstrategy Inc
- Location of incorporation:** Delaware (US)
- State location:** Virginia
- IRS number:** 510323571
- Date filed:** November 17, 1989
- **Status:** Active; and with operations in 28 countries
- **Address:** 1850 Towers Crescent Plaza, Tysons Corner, VA 22182
- **Executive officers:**⁹⁵
 - **Michael J. Saylor**, Chairman of the Board of Directors, President & Chief Executive Officer
 - **Phong Q. Le**, Senior Executive Vice President & Chief Financial Officer
 - **Stephen H. Holdridge**, Senior Executive Vice President, Worldwide Services
 - **Timothy E. Lang**, Senior Executive Vice President & Chief Technology Officer
 - **Kevin Norlin**, Senior Executive Vice President, Worldwide Sales
 - **W. Ming Shao**, Senior Executive Vice President & General Counsel

⁹⁵ Correct as of April 19, 2018

5 Media/Internet Research

Microstrategy

As a publicly traded company, Microstrategy's operations are widely covered in global media sources, particularly in business and market news publications.⁹⁶ The company has been operating for approximately 30 years, and is typically presented in the media as a business respected for the quality of its products, but which has struggled since the burst of the dotcom bubble.⁹⁷

Reviews of open-source media identified no data security issues affecting Microstrategy at a group-level, although reports were uncovered of concerns raised about the data-collection properties of Wisdom, one of its apps (see below). Outwardly, the company demonstrates a commitment to ensuring the security of customer data, as per its privacy policy, and it has recently published an article on its website concerning the impact of the EU's General Data Protection Regulation ("GDPR").⁹⁸

Financial mismanagement claims

Cursory searches were conducted of broader issues affecting the Microstrategy business in recent years. These checks identified evidence of alleged financial mismanagement by the company's senior management team.

In 2000, Microstrategy and members of its executive team agreed to pay a combined settlement of USD 11 million to the US Securities and Exchange Commission in relation to charges of overstating the company's revenue in financial statements for two years in the late-1990s. The settlement included individual contributions from CEO Michael Saylor (who still holds this role) and COO Sanju Bansal paid.⁹⁹

Between 2014 and 2015, the company was reported to be under investigation by law firms Levi & Korsinsky, Vincent Wong and Faruqi & Faruqi in relation to possible

⁹⁶ <https://www.businesswire.com/news/home/20190129005788/en/Microstrategy-Announces-Fourth-Quarter-2018-Financial-Results>

<http://www.bnamerica.com/en/news/ict/us-firm-Microstrategy-to-expand-brazil-office>

https://community.Microstrategy.com/s/announcements?language=en_US

<https://www.nasdaq.com/symbol/mstr>

⁹⁷ <https://www.wsj.com/articles/michael-saylor-guides-Microstrategy-through-valley-of-death-1510322471>

<https://www.bizjournals.com/washington/news/2017/07/28/Microstrategy-wraps-up-three-year-restructuring.html>

<https://www.bizjournals.com/washington/news/2017/05/01/Microstrategy-ceo-michael-saylor-has-a-lot-to-say.html>

https://www.washingtonpost.com/business/capitalbusiness/the-partys-over-at-Microstrategy-and-thats-a-good-thing/2015/08/06/41aaeb4e-3b8a-11e5-b3ac-8a79bc44e5e2_story.html?noredirect=on&utm_term=.3f89972eaa6e

⁹⁸ <https://www.Microstrategy.com/us/resources/blog/bi-trends/why-the-gdpr-matters-a-primer>

⁹⁹ <https://www.computerworld.com/article/2589923/technology-law-regulation/update--Microstrategy-executives-to-pay--11-million-to-settle-sec-fraud-ch.html>

https://www.wsj.com/articles/SB976826476753184721?mod=article_inline

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breaches of fiduciary duty by its management.¹⁰⁰ The outcome of these investigations is unclear, but it is noted that the Levi & Korsinsky and Vincent Wong websites have pages that allow people “with possible claims of breaches of fiduciary duty by the [Microstrategy] Board of Directors” to contact them about these claims.¹⁰¹ It is likely that the investigations related to allegations made as part of the above SEC case.

In February 2019, Microstrategy was reported to be under investigation by Howard G Smith into possible violations of federal securities laws by its management team.¹⁰² Similarly, no further information about this investigation was uncovered.

Alert

Alert has a very limited public profile, which is likely due to its relatively short operating history, which ran from between November 2010 to May 2011. A small number of references to the app were uncovered in press releases, social media news websites and individuals’ social media profiles.¹⁰³

No reports were uncovered in open sources of data security issues involving Alert.

Emma

Emma has not been the subject of significant online or media scrutiny. References to its services were uncovered in a small number of online sources, including blogs and websites advertising competitions sponsored by the app.¹⁰⁴

No reports were uncovered in open sources of data security issues involving Emma.

100 <https://www.businesswire.com/news/home/20150427006184/en/SHAREHOLDER-ALERT-Levi-Korsinsky-LLP-Announces-Investigation>

<https://www.businesswire.com/news/home/20150520006668/en/MSTR-SHAREHOLDER-ALERT-%E2%80%93Law-Offices-Vincent>

<https://www.businesswire.com/news/home/20140403006438/en/Faruqi-Faruqi-LLP-Announces-Investigation-Microstrategy-MSTR>

101 <https://www.zlk.com/pslra-1/Microstrategy-incorporated-loss-form>

<http://docs.wongesq.com/MSTR-Info-Request-Form-726>

102 <https://www.businesswire.com/news/home/20190211005816/en/INVESTOR-ALERT-Law-Offices-Howard-G.-Smith>

103 http://v2.itweb.co.za/index.php?option=com_content&view=article&id=45370

<http://socialmedia-fuer-unternehmer.de/social-media-marketing-and-icommerce-summit-2011-von-Microstrategy/>

<https://www.xing.com/communities/posts/social-marketing-gateway-Microstrategy-launches-gateway-for-facebook-a-social-intelligence-platform-1002430374>

104 <http://themomblogs.com/list-on-emma-the-friendly-marketplace-for-moms-for-a-chance-to-win-a-700-gift-card.shtml>

<http://www.blogtalkradio.com/socialbuzzonair>

https://www.thequestforit.com/the_quest_for_it/2012/02/score-an-invite-to-an-oscar-viewing-party-with-elton-john.html

Loic

LFA has no discernible public profile, which is consistent with its understood function as a test environment for Wisdom.

No reports were uncovered in open sources of data security issues involving Loic.

Usher

Usher has received little coverage in the media or online, although it is frequently difficult to distinguish its activities from subsequent Microstrategy releases that have re-used the “Usher” brand name. References to its activities were uncovered in a handful of app directories and venture capital blogs.¹⁰⁵

No reports were uncovered in open sources of data-security issues involving Usher.

Wisdom

Of this report’s six apps, Wisdom has the highest profile. But coverage is primarily limited to tech-focused media.¹⁰⁶ The Wisdom app’s activities are often difficult to distinguish from Wisdom Professional, a related piece of software that appears to utilize data collected by the original app.¹⁰⁷

Data-collection capabilities

Several press and online sources have referenced Wisdom and Wisdom Professional’s data-collection capabilities, highlighting the apps’ access to large volumes of user and user friend data. Recent reports published after the Cambridge Analytica scandal have raised concern about the extent of these accesses.

Several reports reference organizations accessing data about tens of millions of people via Wisdom or Wisdom Professional. US regional news publication *Tulsa World* reported in November 2012 that the Business Marketing department of the Oklahoma State University Spears School was able to access data approximately 16 million people from Wisdom Professional.¹⁰⁸ An article published in US regional newspaper *The Island Packet* in April 2013 stated that students at the University of South Carolina Beaufort had used Wisdom to view aggregated data from approximately 20 million Facebook

¹⁰⁵ <https://usher-for-managing-events.soft112.com/>

<https://marksmith.ventanaresearch.com/marksmith-blog/2012/01/27/Microstrategy-infuses-social-media-intelligence-into-marketing>

<https://ventanaresearch.wordpress.com/tag/social-media/page/37/>

¹⁰⁶ <https://www.destinationcrm.com/Articles/ReadArticle.aspx?ArticleID=77589>

<https://gigaom.com/2012/01/25/Microstrategy-bets-big-on-facebook-data/>

<https://www.youtube.com/watch?v=2H6xBGHIHIU>

¹⁰⁷ <https://www.slideshare.net/demandmetric/vendor-profile-wisdom-by-Microstrategy>

¹⁰⁸ *Tulsa World*, “Facebook used for political sampling”, November 5, 2012

users to help develop a tourism marketing plan for Bluffton in South Carolina.¹⁰⁹ Similarly, in May 2013, Petter Bae Brandtzaeg, an associate professor at the University of Oslo and Chief Scientist at SINTEF, one of Europe's largest independent research organizations, claimed that Wisdom had granted him access to data from over 20 million people to support his studies.¹¹⁰

In March 2018, tech news website *The Verge* published an article entitled "The shady data-gathering tactics used by Cambridge Analytica were an open secret to online marketers. I know because I was one." In it, Alexandra Samuel, the former Vice President of Social Media for customer-intelligence-software company Vision Critical, claimed that Microstrategy employees told her that Wisdom could access data from **17.5 million people** — even though the app itself had only been installed by approximately 50,000 users.¹¹¹ She was quoted:¹¹²

In 2012, the data analytics firm Microstrategy pitched me on their "Wisdom" tool for Facebook, which the company had touted as a data source based on "12 million anonymous, opted-in Facebook users." But when I spoke with an analyst at Microstrategy that December, he told me that the company's data set — by then, nearly 17.5 million strong — was based on just 52,600 actual installs, each of which provided access to an average of 332 friends.

Samuel also commented in the article that Microstrategy was not "doing something unusual [compared to other firms at that time]".

Benefits for electoral polling

In November 2012, an online article published by the *Washington Post* discussed how Wisdom could be utilized by pollsters as part of the US general election. The article highlighted the app's ability to conduct instant polls and reported that it had a user base of approximately **16 million users** from which it could gather data about voter preferences. Richard Krueger, a Senior Director of Marketing at the Microstrategy, was paraphrased as claiming that:¹¹³

Wisdom doesn't measure every Facebook member and "like." It gathers the data from people who have joined the network and the friends of those people, ...

Notably, the article contains no allegations of wrongdoing regarding the electoral process.

¹⁰⁹ "USCB students mine Facebook to get traveler to 'like' Bluffton," *The Island Packet*, April 1, 2013.

¹¹⁰ <https://www.sciencedaily.com/releases/2013/05/130522085217.htm>

¹¹¹ <https://www.theverge.com/2018/3/25/17161726/facebook-cambridge-analytica-data-online-marketers>

¹¹² <https://www.theverge.com/2018/3/25/17161726/facebook-cambridge-analytica-data-online-marketers>

¹¹³ *Washing Post.com*, "The politics of Facebook 'likes'; New app allows users to mine the likes of Romney, Obama fans on Facebook.", November 2, 2012.

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Academic study using Wisdom Professional

Wisdom Professional, the version of Wisdom tailored to corporate clients, was used as a tool as part of an academic study entitled “Analyzing the collective intelligence application software ‘Wisdom Professional’ for advertising in (social) media, case study: Coca-Cola”, which was published in the *International Journal of Information Theories and Applications* in 2014 (volume 21, number 1).¹¹⁴ The study’s authors, Elham Fayezioghani, Koen Vanhoof, claimed that Facebook user data provided by the app could be used to provide important information about customers to marketing teams at big name brands, and used Coca-cola as an example. The study claimed that the user data Wisdom was used for the study as it represented a “small community which appropriately resembles the real world”.¹¹⁵ The descriptions of the app’s functionality in the study are broadly consistent with those in other research sources.

WIT

WIT has no discernible public profile, which is consistent with its understood function as a test environment for Wisdom.

No reports were uncovered in open sources of data security issues involving WIT.

6 Adverse Records

Criminal Records

Specific research in this public record category was not conducted, but can be upon request. No information regarding criminal activity involving the subject apps and associated parties was identified in media research.

Civil Records

Specific research in this public record category was not conducted, but can be upon request.

Reviews of media and online sources uncovered a large number of references to Microstrategy’s involvement in legal action. The most notable of these concerns were class action suits taken against the company by investors who claimed they were defrauded due to the business publishing inflated revenues in the late-1990s.¹¹⁶

¹¹⁴ <http://www.foibg.com/ijita/vol21/ijita21-01.pdf#page=3>

¹¹⁵ <http://www.foibg.com/ijita/vol21/ijita21-01.pdf#page=3>

¹¹⁶ https://www.washingtonpost.com/archive/business/2000/10/25/Microstrategy-settles-lawsuit/4925775d-5cf0-486a-8b98-98949b4ade74/?utm_term=.e7e833fc03ec

<https://ir.Microstrategy.com/static-files/da51f29d-3cd6-4ef3-82eb-d221672ada03>

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Numerous other cases were identified, although no obvious association was identified to issues relating to data security.¹¹⁷ One case was uncovered involving the Emma app, which saw Microstrategy accused in late-2011 of having infringed on the trademark of a Nashville-based tech company also called Emma.¹¹⁸ These cases can be examined in further detail upon client request and supplementary litigation research can be performed.

Bankruptcies, Judgments and Liens

Specific research in this public record category was not conducted, but can be upon request. No information regarding bankruptcies associated with the apps and businesses examined in this report was identified in media research.

¹¹⁷ <https://caselaw.findlaw.com/us-4th-circuit/1408619.html>

<https://law.justia.com/cases/federal/district-courts/FSupp2/114/489/2343205/>

<https://www.bizjournals.com/washington/blog/techflash/2014/09/Microstrategy-sues-former-customer-for-1-3m-over.html>

<https://domainnamewire.com/2017/10/02/Microstrategy-glory-domain/>

<https://www.casemine.com/judgement/us/5b18ad508f67d660f1a29274>

<https://www.informationweek.com/Microstrategy-defeats-patent-infringement-suit/d/d-id/1020631>

¹¹⁸ <https://www.nashvillepost.com/home/blog/20460726/emma-sues-virginia-company-over-brand>

<http://www.schwimmerlegal.com/2011/10/emma-v-emma.html>

Appendices

Below are supplementary documents and URLs relating to information in this report.

Appendix A – Microstrategy Privacy Policy

Below is the Microstrategy privacy policy, as posted on the company's website as of February 14, 2019.¹¹⁹

Microstrategy Privacy Policy

Effective December 4, 2018

We at Microstrategy know you care about your privacy, and so do we. We have developed this Privacy Policy to describe the types of Personal Information we may collect, how we may use and share that information, and how we protect it. By using, accessing, or purchasing our applications, products/services, and/or websites (the "Microstrategy Offerings"), you agree to the terms of this Privacy Policy. We are not in the business of selling Personal Information about you to advertisers or spammers.

"Personal Information" is any information that relates to you, and which, alone or in combination with other information, could reasonably be used to identify you.

We may make changes to this Privacy Policy from time to time, so please review it frequently. We will indicate at the top of the policy when it was most recently updated and, if the changes are significant, we will provide more prominent notice.

Note that this Privacy Policy also applies to use of our security and identity product offering (which includes the Badge and Communicator applications), branded as Identity ("Identity") as part of a service that is hosted by Microstrategy or a third-party service provider on behalf of Microstrategy (a "Cloud Implementation"). If you are using Identity as part of a service other than a Cloud Implementation (e.g., one that is hosted on-premises by your employer), then: (i) Microstrategy is not collecting, using or sharing any Personal Information about you; and (ii) the organization that makes the service available to you (or, if applicable, the third party that hosts the services on behalf of such organization) (the "Implementing Organization") may collect, use or share Personal Information about you, and details about the Personal Information they collect maybe found in their own privacy policy. If you are using Identity as part of an implementation of the Microstrategy Offerings other than a Cloud Implementation, please contact the Implementing Organization to obtain information regarding what Personal Information they are collecting and how they are using or sharing that information.

Information We Collect

We may collect or receive Personal Information about you in various ways, depending on which of our applications and websites you use and how you interact with us.

Information You Provide and Information We Collect From Other Sources

You may choose to submit Personal Information and other information to us by purchasing or interacting with the Microstrategy Offerings, such as when you create and manage a

¹¹⁹ <https://www.microstrategy.com/us/legal-folder/privacy-policy>

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user account, join or connect with a network, request technical support services, request information or support from us, communicate with us by email, telephone, or online chat, upload information through the Microstrategy Offerings, subscribe to newsletters or other subscription services, register for training or conferences, purchase products and services, submit job applications, or participate in surveys.

For certain of the Microstrategy Offerings, we ask you to provide information including:

- Basic personal details (e.g., your name, title, and gender);
- Contact details (e.g., your email address, postal address, and phone number);
- Professional details (e.g., your company or organization name and any professional organization memberships);
- Usernames or URLs;
- Payment details (e.g., credit card information, bank account, etc.);
- Your photo; and
- Any other Personal Information you choose to provide us (e.g., in communications with technical support services, marketing teams, or during the provision of products/services).

Some of the information is necessary for us to provide particular Microstrategy Offerings, and our ability to deliver the Microstrategy Offerings to you may be affected by your not providing certain information.

We may also collect these categories of information from sources other than directly from you. In particular, we collect this information from publicly available sources (such as your employer's website or professional social networks such as LinkedIn), and may obtain Personal Information from third party data providers which maintain lists of individuals' contact information. Other users of the Microstrategy Offerings may provide information about you when they submit content through the Microstrategy Offerings. For example, you may be mentioned in a technical support case opened by someone else. Similarly, an administrator may provide your personal data such as when they designate you as the billing or technical contact on your company's account.

Please note that we may also have access to information about you that our customers may upload to our cloud services.

Biometric Information

When using the Identity mobile application, you may be asked to allow access to the fingerprint scanner and/or camera on your device. This access is requested so that a fingerprint or facial profile may be collected to validate your credentialing information when logging into that device. This information, which may be considered biometric data (the "Biometric Information") is not transmitted to us and we do not receive or retain it. We only maintain records of when your credentialing information has been validated by Identity.

The Biometric Information may be provided to individuals such as Identity Network administrators, User Mobile Users, and other users of the Identity Networks you choose to participate in, as a means of confirming credentialing information. Where this occurs, the Biometric Information is subject to those third-parties own privacy policies, terms and conditions and other policies. We encourage you to read those third-party policies and agreements before participating in such credentialing activities.

Information We Collect

When you access or use Microstrategy Offerings, we may collect certain information about your device and your use of the Microstrategy Offerings. Such information may include:

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- information, including version information, about the web browser or application you are using;
- products/services you purchased, with related pricing;
- if you are using a mobile device, the model of the device and its operating system;
- crash data;
- a unique identifier we assign to you;
- your IP address; and
- information about your usage of the Microstrategy Offerings, including what functions or pages you use, the frequency of your use, links that you click on, and how often you log in.

Location Information

In addition to the above, to provide certain of the Microstrategy Offerings, we may request your permission to access location information from your device. Some functions of the Microstrategy Offerings may not work if you choose not to allow access to this location information. If you initially consent to sharing your location information through one of our applications or websites, you can subsequently stop the collection of this information by changing the settings of your device or by uninstalling the applications. In addition, even if you have not enabled location services for the applications or websites, we may derive your general location information from your use of the applications or websites, including from your Bluetooth signal when using Identity.

Cookies and Similar Technologies

When you use our websites, we may collect certain information by automated means, such as cookies. A “cookie” is a file that websites send to a visitor’s computer or other Internet-connected device to uniquely identify the visitor’s browser or to store information or settings on the device. The information we collect in this manner enables us to better serve you when you return to our sites - for example, it can “remember” your email address to save you having to enter it manually upon your return. We also use cookies to track responses to our marketing materials, such as emails and online advertisements. Your browser may tell you how to be notified when you receive certain types of cookies or how to restrict or disable certain types of cookies. For more information about Microstrategy’s own cookies, please email webmaster@Microstrategy.com.

Some of our websites also use marketing automation technology (Marketo) to collect data on visitor behavior. These Marketo cookies help us track your visits to our websites and enable us to create an engaging marketing experience for you. We also use Marketo cookies to understand your interaction with the emails we send you, and to ensure we’re sending you relevant information; specifically, Marketo cookies let us know whether our emails have been opened, and which links are clicked. For more information on Marketo’s privacy and cookie policy, please [click here](#).

Some of our websites may also feature cookies associated with certain unaffiliated companies. For example, we partner with other companies to provide you with connections to certain social networks, such as Facebook and Twitter, and to provide you with additional features such as YouTube. By engaging with such other companies’ sites, for instance, by clicking the Facebook “Like” button found on our Site, such companies may place session or persistent cookies on your device. This may allow these third-parties to collect information about your online activities over time and across websites. The use of these cookies is subject to such third-parties’ own cookie policies, which Microstrategy strongly recommends you review.

Web Analytics and Interest-Based Advertising

We may use web analytics services on our websites, such as those of Google Analytics. The service providers that administer these services use technologies such as cookies to help us analyze how visitors use the site. The information collected through these means (including IP address) is disclosed to or collected directly by these service providers, who use the information to evaluate use of the website or for advertising purposes, as described below.

Some of our online advertising takes place through Google Display Advertising. As part of this program, we use Google Analytics features such as Retargeting. In connection with that feature and others offered by ad networks, we and the operators of ad networks, including Google, may use third-party cookies (such as the DoubleClick cookie) – and in some cases first-party cookies (such as the Google Analytics cookie) – to inform, optimize, and serve ads across the internet based on a user's past visits to our website.

You can opt out of Google Analytics for Display Advertising or customize Google Display Network ads using the [Google Ads Preferences Manager](#). To disable Google Analytics in general, please download the browser add-on for the deactivation of Google Analytics provided by Google at <https://tools.google.com/dlpage/gaoptout>. To learn more about other ad networks, including how to opt out, [click here](#).

Do Not Track

Some web browsers and mobile devices incorporate a “do not track” feature that, when enabled, signals to websites and online services that you do not wish to be tracked. Because there is not yet an accepted standard for how to respond to such a do-not-track signal, we do not recognize or respond to these signals.

How We Use the Information We Collect

We may use the information we collect from you to:

- provide products/services to you;
- bill/invoice you;
- manage any accounts that you may have with us;
- validate your identity;
- send personalized marketing messages via email, post and telephone to you. Where required by applicable law, we will only send these messages with your consent, and you have the right to opt out of receiving marketing by contacting us;
- serve relevant advertising on our site and third-party sites related to our products and services which are personalized to your interests;
- provide you with notice of product releases, special events, trainings, promotions or other matters relevant to you;
- respond to your inquiries;
- improve the services you receive from us;
- solicit your feedback;
- prevent you from having to re-enter Personal Information about you on future visits to our websites or subsequent use of our applications;
- facilitate your access to third-party services and resources;
- keep track of your activities;
- process your payments and purchases;
- operate, evaluate and improve our business (including developing new products and services; enhancing and improving our services; managing our communications; analyzing

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our products; performing data analytics; and performing accounting, auditing and other internal functions);

- detect and prevent fraud and other unauthorized activity and enforce our terms of use; and
- comply with applicable legal requirements, relevant industry standards and our policies.

We also use the information we obtain about you in other ways for which we provide specific notice at the time of collection.

If you are an individual in the E.U., we may be required to have a legal basis to process your Personal Information for these purposes under applicable E.U. law. We may ask for your consent in certain circumstances as indicated above, but if we do not ask for your specific consent:

- We use your Personal Information for certain purposes as it is necessary to comply with contractual obligations we have to you, including when we provide Microstrategy Offerings to you in accordance with the applicable terms and conditions, or when we process payments and purchases you make;
- We may also use Personal Information to comply with our legal obligations, such as financial reporting obligations and compliance with subpoenas or similar court orders; and
- Where not strictly required by contract or by law, we use Personal Information to meet our legitimate business interests (when the use not overridden by your data protection interests) in running our business efficiently, in advertising our products and services to existing and prospective customers, understanding how our business is performing defending our interests and our legal rights, and keeping our records accurate and up to date. We take steps to ensure that your Personal Information is not used in ways other than those you would expect, and subject to laws in the country where you live, you have the right to object to our uses of Personal Information on this basis.

How We May Share Information

We disclose information about you: (i) to our third-party service providers; (ii) to other Microstrategy group companies; (iii) if we are required to do so by law, regulation or legal process (such as a court order or subpoena), (iv) in response to requests by government agencies, such as law enforcement authorities, (v) when we believe disclosure is necessary or appropriate to prevent physical harm or financial loss or in connection with an investigation of suspected or actual illegal activity (vi) to protect our legitimate business interests or (vii) in any other case, with your consent. We also reserve the right to transfer any information we have about you in connection with any sale or transfer of all or a portion of our business or assets, including in the event of a reorganization, dissolution or liquidation.

In addition, if you are using Identity, we may share certain of your information with the administrator of an Identity Network that you are a member of, with other users of the Identity application, or with third party services with which your Identity Badge is integrated.

Privacy Shield Notice

Disclosures of information under this Privacy Policy will involve the use of Personal Information in the U.S. and other countries whose data protection laws may not be regarded as providing the same level of protection as those of the country in which you live. We have certified to the U.S. Department of Commerce that we comply with the E.U.-U.S. Privacy Shield Framework and the Swiss-U.S. Privacy Shield and adhere to the Privacy Shield Principles. Accordingly, our privacy practices for Personal Information received in the U.S. from the E.U. and Switzerland are subject to this framework and are consistent with the Privacy Shield Principles of notice, choice, onward transfer, security, data integrity and purpose limitation, access, and enforcement. If there is any conflict between the terms

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in this Privacy Policy and the Privacy Shield Principles, the Privacy Shield Principles shall govern.

As described above, we may use third-party service providers to perform services on our behalf. If we transfer personal information received under the Privacy Shield to a third party, the third party's access, use, and disclosure of the personal data must also be in compliance with our Privacy Shield obligations, and we will remain liable under the Privacy Shield for any failure to do so by the third party unless we prove we are not responsible for the event giving rise to the damage.

To learn more about the Privacy Shield Framework, and to view our certification, please visit <https://www.privacyshield.gov/>. If you are an employee of Microstrategy, please refer to the Code of Conduct and Employee Handbook for policies governing your information.

If you have any comments or inquiries about this Privacy Policy, please see our contact details below. If you have an unresolved privacy or data use concern that we have not addressed satisfactorily, please contact our U.S.-based independent alternative dispute resolution provider (free of charge) at <https://www.jamsadr.com/eu-us-privacy-shield>. Under certain conditions, more fully described in Annex I on the [Privacy Shield website](#), you may invoke binding arbitration when other dispute resolution procedures have been exhausted.

For transfers to other jurisdictions, we have put in place appropriate safeguards (such as contractual commitments) in accordance with applicable legal requirements to ensure that Personal Information about you is adequately protected. For more information on the appropriate safeguards in place, please contact us at the details below.

The U.S. Federal Trade Commission has jurisdiction over our compliance with the Privacy Shield.

How We Protect Personal Information

We maintain administrative, technical and physical safeguards designed to protect the Personal Information you provide against accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use.

We also ensure that, in compliance with applicable law, we do not retain Personal Information longer than necessary. We will keep personal data about you for as long as we have a relationship with you, for example as long as you wish to keep receiving marketing messages from us, or as long as you are a customer (and for a reasonable period thereafter). When determining how long to retain Personal Information after we no longer have a relationship with you, we take into account how long our customers usually want to continue hearing from us, our legal obligations and the expectations of regulators, as well as the length of time information is needed for internal audit purposes and to exercise or defend our legal rights.

Links to Other Websites

The Microstrategy Offerings may contain links to websites maintained by third parties, whose information and privacy practices differ from ours, including, for example, websites that process online payments. We are not responsible or liable for the content of any such websites, any use of such websites or the information or privacy practices employed by the providers of such websites. We encourage you to read the privacy statements of all third-party websites before using such websites or submitting any Personal Information or any other information on or through such websites.

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Not for Use by Children

The Services are not directed to, and we do not knowingly contact or collect Personal Information from, individuals under the age of thirteen. If you are under the age of thirteen, these Services are not intended for you and you should not provide us with any Personal Information.

Access and Correction

To request a copy of the Personal Information we maintain about you, update or correct inaccuracies in that information, or request that we remove your Personal Information from our systems and stop contacting you at any time, please send an email to privacy@Microstrategy.com that details your request and includes your exact name, physical address and email address. You also have in particular circumstances the right to object to our uses of your Personal Information, the right to restrict our uses of your Personal Information, and the right to have personal data transmitted in electronic form to you or to a third party (the right of "data portability").

How to Contact Us

If you have any comments or inquiries about this Privacy Policy, if you would like to update information we have about you or to exercise your rights, you may contact us by sending an email to privacy@Microstrategy.com or by sending regular mail to the following address:

Attn: Office of the General Counsel
Microstrategy Incorporated
1850 Towers Crescent Plaza
Tysons Corner, Virginia 22182

If you are located in the E.U., you may also write to us at:

Microstrategy Limited
Building 10, Chiswick Park
566 Chiswick High Road
Chiswick, London, W4 5XS
Attn: Legal Department

We are committed to working with you to obtain a fair resolution of any complaint or concern about privacy. If, however, you believe that we have not been able to assist with your complaint or concern, you have the right to make a complaint to the data protection authority in the country in which you live via their website.

Appendix B – Alert Privacy Policy

Below is the Alert privacy policy, as captured by the Wayback Machine on September 25, 2011.¹²⁰

Alert Privacy Policy

We at **Strategy Network Incorporated** (“we” or the “Company”) respect your privacy and value the relationship we have with you. This Privacy Policy is designed to show you what information about you we collect through the Alert application on the social network operated by Facebook (the “Facebook Application”), the related mobile device software applications (the “Mobile Software”) and the Alert website at alert.com (together with the Facebook Application and the Mobile Software, the “Service”), and how we use and share that information. Your use of Facebook in general and your relationship with Facebook are subject to Facebook’s own Privacy Policy and Facebook’s other terms and policies, which we strongly recommend that you review before you start using the Service. We do not control and are not responsible for Facebook’s processing of your information.

Information We Collect About You

The Service enables you to receive personalized and exclusive content from people, companies and other organizations selected by you (“Brands”). In order to facilitate this process, the Service may collect certain personal information from you. This information includes:

- Facebook Information: “Facebook Information” consists of information that was provided by you or other users to Facebook or was associated by Facebook with a particular user. When you use the Service, we may collect any Facebook Information you have made visible to “Everyone” on Facebook as well as the information Facebook designates as your publicly available information. This includes your:
 - name
 - profile picture
 - gender
 - current city
 - networks
 - friend list
 - pages

When first using the Service, you will also be asked to grant us access to additional Facebook Information that you are allowed to share under Facebook’s policies. Currently, we ask that you share the following information:

- your contact information, including your email address, phone number and mailing address
- items you have “liked”

¹²⁰ <https://web.archive.org/web/20110925025601/http://alert.com/privacy-policy.html>

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- your profile information, including your birthday, hometown and current city
- posts in your newsfeed
- photos and videos you have uploaded to Facebook
- your calendar of events
- your custom friend lists
- your online presence
- your "check-ins" and friends' "check-ins"
- information about your friends

Even if you have not explicitly allowed us access to any of your Facebook Information, we may collect information about you when your friends on Facebook allow access to and use the Service, subject to your Facebook settings. We may also send you emails and post on your Facebook Wall in connection with your use of the Service.

- **Service Information:** We may also collect information other than Facebook Information based upon your use of the Service ("Service Information"). Service Information may include information we receive from you in connection with your requests for customer support, your user feedback or other communications you direct to us. Service Information may also include information related to your use of the Service, including from which Brands you choose to receive content, how you use such content, what items you purchase using the Service and how you pay for your purchases made through the Service.
- **Information We Collect When You Access the Service on a Mobile Device:** When you use the Mobile Software on your mobile telephone or other mobile device, we collect your unique device identifier, IP address and location ("Mobile Information" and together with Facebook Information and Service Information "User Information").

Information Collected by Third Parties

Certain information that you are prompted to provide in connection with your usage of the Service will not be collected by us, but by third parties. Such data will not be subject to this Privacy Policy but will instead be subject to the privacy policies of the applicable third party, which we strongly recommend that you review. Examples of personal data that you may provide to other parties in connection with your use of the Service include:

- **Mobile Log-in Information:** To log into the Mobile Software, you must input your email address and Facebook password. This Facebook login information is collected directly by Facebook as part of the login process and does not pass through our servers.
- **Information Collected by Third Party Providers of Payment Services:** If you make a purchase through the Service, you may be directed to a third party provider of payment services (e.g. PayPal or Zen Cart) that requests certain payment-related personal information from you, such as your credit card number. This personal information is collected directly by the third party service provider and does not pass through our servers. We do not control and are not responsible for such service provider's processing of your information.
- **Information That May Be Collected by Other Third Party Sites:** The Service may provide you with links to other web sites, Facebook pages or applications ("Third Party Sites"), including the Facebook pages or web sites of those Brands from which you have chosen to receive personalized content through the Service. We do not control and are not responsible for the processing of your information by any Third Party Sites.

How We Use Your User Information

The Company will only use your User Information for the following purposes:

- to enable those Brands selected by you to provide you with personalized and exclusive news, offers and other content
- to post on your Wall or to send you emails regarding your use of the Service
- to provide technical support and to respond to your inquiries
- to communicate about new features or promotions of the Service
- to prevent fraud or potentially illegal activities and to enforce our Terms of Use
- to solicit your feedback to improve the Service and your experience using it
- to administer and improve the Service
- to comply with legal requirements and prevent harm or loss
- to keep track of your activity levels and location in order to improve the level of service you receive from the Service (we may use your Mobile Information for this purpose)
- to enable third parties to deliver targeted advertising

How We Share Your User Information

We may share your User Information in the following cases:

- **With Brands Selected by You:**

When making certain selections within the Service, you may be prompted to confirm whether you would like to receive personalized and exclusive content from a Brand. If you select "yes" the Service will make certain of your User Information available to such Brand solely for the purpose of enabling the Brand to deliver such content to you through the Service. On the same screen, you will also have an opportunity to check a box indicating that you would like to receive personalized and exclusive content from other celebrities and companies that you currently "like" or "like" in the future. If you select this option, your User Information will be shared with all Brands whose pages you "like" on Facebook at such time and who are part of the Service as well as all Brands you "like" on Facebook in the future who are part of the Service. User information provided to Brands will never include your name or contact information or any other data that would enable the Brand to directly contact you outside of the Service. You will have the ability to stop the sharing of your User Information with any or all Brands at any time by clicking on the "Settings" tab in the Service and following the directions.

- **With Affiliates and Third-Party Service Providers:**

We may disclose your User Information to our affiliates and third-party service providers to the extent permitted by Facebook. Except as otherwise set forth in this section, we will only share your User information with any such parties in connection with the administration of the Service or for the purpose of improving your experience with the Service. Third party service providers are not authorized by us to use or disclose your User Information except as necessary to perform services on our behalf or comply with legal requirements.

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- **With Advertisers:**

We may disclose your User Information to advertisers in aggregated and anonymous form in order to deliver targeted advertising.

- **With Your Consent:**

We may share your User Information with other third parties with your consent.

- **As Required by Law:**

We may disclose any User information we deem necessary, in our sole discretion, to comply with any applicable law, regulation, legal process or governmental request.

- **To Prevent Harm or Loss:**

We may disclose User Information when we believe, in our sole discretion, disclosure is necessary or appropriate to prevent physical harm or financial loss or in connection with suspected or actual illegal activity.

- **In Connection With a Sale of Our Business:**

We also reserve the right to transfer User Information in the event we sell or transfer all or a portion of our business or assets. Should such a sale or transfer occur, we will use reasonable efforts to direct the transferee to use the User Information in a manner that is consistent with this Privacy Policy. Following such a sale or transfer, you may contact the entity to which we transferred the User Information with any inquiries concerning the processing of that information.

We do not control and are not responsible for Facebook's own use of content and information it collects in relation to this Service.

How We Protect Your User Information

We maintain administrative, technical and physical safeguards designed to protect the User Information that we collect about you against accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use. While we cannot guarantee that no accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use of your information will occur, we try to prevent such occurrences.

Transfers of User Information to Other Countries

The Company uses databases located in different jurisdictions. We may transfer User Information we collect about you to our databases outside your country of residence. Even if the laws in the country to which the information is transferred do not require us to provide adequate protection for your data, we will nevertheless seek to ensure that information transferred to such country is adequately protected.

Your Privacy Rights and Choices

You may stop the Service from using your User Information at any time by (i) uninstalling the Facebook Application and setting your Facebook privacy settings to prevent the Service from accessing your Facebook Information through your friends or (ii) by deleting your Facebook account. Subject to applicable law, we provide you with access to the User Information we have retained about you and the ability to review, correct, update, block or delete the information where it is inaccurate. You can adjust your communications and sharing preferences, including which Brands have access to your personal information, by following the instructions under the "Settings" tab. Subject to applicable law, we may limit or deny access to your User Information where providing such access is unreasonably

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burdensome or expensive under the circumstances. Please submit your request to the address specified in the “How to Contact Us” section below.

Updates to This Privacy Policy

This Privacy Policy may be updated periodically and without prior notice to you to reflect changes in our information processing practices or for any other purpose. We will post a notice in the Info section of the Service’s profile to notify you of any significant changes to the Privacy Policy and indicate there and at the top of the Privacy Policy when it was most recently updated.

How to Contact Us

If you have any questions or comments about this Privacy Policy, please contact us by email at support@alert.com or telephone at 703-744-6529. You also may write to us at Strategy Network, 1850 Towers Crescent Plaza, Vienna, Virginia 22182, Attn: Office of the General Counsel. Questions or comments submitted through other means, such as Wall posts, may not be received or addressed.

Appendix C – Alert Terms of Use ¹²¹

Alert Terms of Use

These Terms of Use, as amended from time to time, apply to each user of the Alert application on the social network operated by Facebook (the “Facebook Application”), the related mobile device software applications (the “Mobile Software”) and on the Alert website at alert.com (together with the Facebook Application and the Mobile Software, the “Service”) owned and operated by Strategy Network Incorporated (the “Company” or “we”, “us”, “our”). The presence of the Facebook Application on Facebook does not indicate any relationship or affiliation between the Company and Facebook.

The Service enables you to become a “superfan” of the Facebook pages of your favorite celebrities, products, causes and organizations (“Pages”). As a “superfan” you will receive on your computer, smartphone and/or tablet device personalized and interactive news, messages and real-time offerings from the Pages you select. The Company offers the Service, including all information, tools and services available from the Service, to you, the user, conditioned upon your acceptance of all the terms, conditions, policies and notices stated here. Your use of the Service constitutes your agreement to these Terms of Use and is subject to these Terms of Use and all applicable laws, rules and regulations. The Terms of Use shall commence on the earlier to occur of the date you add the Facebook Application to your Facebook account and the date you first use or access the Mobile Software.

The Company reserves the right to modify, add or delete portions of these Terms of Use at any time and for any purpose. You are responsible for reviewing these Terms of Use often enough to stay abreast of any changes. We will endeavor to notify you of any changes by posting notice of such changes on the Service or by sending you a message through Facebook. Your use of the Service following any change or amendment to these Terms of Use constitutes your acceptance of such change or update. If you do not agree to abide by these or any future Terms of Use, you are not authorized to use or access (or continue to use or access) the Service.

If you violate these Terms of Use, we may, at our sole discretion, issue you a warning or terminate your ability to use the Service. You understand that we may terminate your ability to use the Service at any time with or without reason, notice to you or any liability on our part.

Privacy

The Company believes strongly in user privacy. Please refer to the Service’s Privacy Policy for information on how we collect, use and disclose personal information from users of the Service. Your use of the Service signifies your acknowledgment of, and agreement to, the Service’s Privacy Policy.

Eligibility

If you are 18 years old or younger, you are not authorized to register or submit any content or information in connection with the Service without the explicit consent of your parent or legal guardian. If you live in a state or country where consent of a parent or guardian is required if you are under the age of 21, you may be required by us to secure such consent prior to your registration with the Service.

¹²¹ <https://web.archive.org/web/20110925031018/http://alert.com/terms-of-use.html>

Use of the Service

You may access the Service for your personal non-commercial use. Any other use of the Service or the content on the Service (including, without limitation, text, design, graphics, logos, icons, images, audio clips, downloads, interfaces, code and software, as well as the selection and arrangement thereof) (the "Service Content"), including but not limited to the modification, distribution, transmission, performance, broadcast, publication, uploading, licensing, reverse engineering, transfer or sale of, or the creation of derivative works from, any material, information, software, products or services obtained from the Service, or use of the Service for purposes competitive to the Company, is expressly prohibited.

You may not use contact information provided on the Service for unauthorized purposes, including marketing. You may not use any hardware or software intended to damage or interfere with the proper working of the Service or to surreptitiously intercept any system, data or personal information from the Service. You agree not to interrupt or attempt to interrupt the operation of the Service in any way.

You are responsible for protecting the confidentiality of the password associated with your Facebook account and for restricting access to your computer while logged into the Service. You agree that you will be responsible for any and all statements made, and acts or omissions that occur, through the use of your Facebook account. If you have any reason to believe or become aware of any loss, theft or unauthorized use of your password, notify the Company immediately. The Company may assume that any communications the Company receives under your password have been made by you unless the Company receives notice otherwise.

You or third parties acting on your behalf are not allowed to frame the Service or use our proprietary marks as meta tags, without our written consent. You may not use frames or utilize framing techniques or technology to enclose any Service Content without the Company's express written consent. Further, you may not utilize any Service Content in any meta tags or any other "hidden text" techniques or technologies without the Company's express written consent.

The Company reserves the right, in its sole discretion, to limit or terminate your access to or use of the Service at any time without notice. Neither these Terms of Use nor termination of your access or use will waive or adversely affect any other right or relief to which the Company may be entitled at law or in equity.

Accuracy, Completeness and Timeliness of Information on the Service

The Company is not responsible for the accuracy, completeness or currency of information made available to you on the Service and you should not rely on any such information being accurate, current or complete. The material provided to you by the Service is provided for general information only and should not be relied upon or used as the basis for making decisions. Any reliance on the material on the Service is at your own risk. We reserve the right to modify the Service at any time, but we have no obligation to update any information on the Service.

Materials You Submit

You acknowledge that you are responsible for any material you may post or submit to the Service, including all information and content that is provided by you or other users to Facebook and to which you then grant the Service access (collectively, "User Content"). Your responsibilities include the legality, reliability, appropriateness, originality and copyright of any User Content. You may not upload to, distribute, grant access to or otherwise publish through the Service any User Content that (i) is confidential, proprietary, false, fraudulent, libelous, defamatory, obscene, threatening, invasive of privacy or publicity

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rights, infringing on intellectual property rights, abusive, illegal or otherwise objectionable; (ii) may constitute or encourage a criminal offense, violate the rights of any party or otherwise give rise to liability or violate any law; (iii) may contain software viruses, political campaigning, chain letters, mass mailings, or any form of "spam"; or (iv) is otherwise in violation of Facebook's rules or policies, as they may be updated from time to time. You may not use a false email address or other identifying information, impersonate any person or entity or otherwise mislead as to the origin of any User Content. You may not upload commercial content onto the Service.

Unless we indicate otherwise, you grant the Company and its affiliates an unrestricted, nonexclusive, royalty-free, perpetual, irrevocable and fully sublicensable right to use, reproduce, modify, adapt, publish, translate, create derivative works from, distribute and display User Content throughout the world in any media, subject in each case to the restrictions set forth in the Service's Privacy Policy. You further agree that the Company and its affiliates are free to use any ideas, concepts, know-how that you or individuals acting on your behalf provide to the Company or its affiliates. You represent and warrant that you own or otherwise control all the rights to User Content; that User Content is accurate; that use of User Content does not violate any provision herein and will not cause injury to any person or entity; and that you will indemnify the Company and its affiliates for all claims resulting from User Content. In addition, at all times in your use of the Service, you are also subject to Facebook's Statement of Rights and Responsibilities, Privacy Policy, and other rules or regulations and, as such, any User Content can be used by Facebook according to such policies.

Users' Representations and Warranties

In connection with your use of the Service, you represent and warrant that you will not, and will not allow any third party to:

- Violate any proprietary rights of any person or entity;
- Remove, obscure or change any copyright, trademark, hyperlink or other proprietary rights notices contained within the Service or Service Content;
- Modify, adapt, disassemble, decompile, translate, reverse engineer or otherwise attempt to discover the source code or structure, sequence and organization of the Service, the Service Content or any content contained therein;
- Use the Service in any manner that could damage, disable, overburden, or impair the Service, the Company, Facebook, or any other person or entity;
- Collect any information (including usernames and/or email addresses) about other users of the Service; create or transmit unwanted electronic communications to other users of the Service; or otherwise interfere with such users' enjoyment of the Service;
- Use the Service to further or promote any illegal activity or enterprise, including fraud, trafficking in obscene material, pornography, drug dealing, gambling, harassment, stalking, spamming, or distributing viruses or other harmful files; or
- Use the Service in violation of these Terms of Use, Facebook's rules and policies or any applicable laws or regulations.

You may not take any action to interfere with the Service or any other user's use of the Service. You expressly agree that you will not copy, reproduce, modify, create derivative works from, distribute or publicly display any Service Content without our prior written consent or the consent of the content owner if such Service Content is not owned by the Company. You agree not to bypass any measures we may use to prevent or restrict access to the Service. You shall not use the Service for illegal purposes (including, without

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limitation, unlawful, harassing, libelous, invasion of another's privacy, abusive, threatening or obscene purposes). You will comply with all laws related to your use of the Service.

Third Party Websites and Content

The Service may contain (or you may be sent through the Service) links to other web sites or Facebook pages ("Third Party Sites"), including Pages for which you have become a "superfan," websites associated with such Pages and news, messages and offerings you may receive from such Pages, as well as articles, photographs, text, graphics, pictures, designs, sound, video, information, and other content or items belonging to or originating from third parties (the "Third Party Content"). Such Third Party Sites and Third Party Content are not investigated, monitored or checked for accuracy, appropriateness, or completeness by us, and we are not responsible for any Third Party Sites accessed through the Service or any Third Party Content posted on, available through the Service, including the content, accuracy, offensiveness, opinions, reliability, privacy practices or other policies of or contained in the Third Party Sites or the Third Party Content. Inclusion of, linking to or permitting the use of any Third Party Site or any Third Party Content does not imply approval or endorsement thereof by the Company. If you decide to leave the Service and access the Third Party Sites or to access or use any Third Party Content, you do so at your own risk and you should be aware that our terms and policies no longer govern. You should review the applicable terms and policies, including privacy and data gathering practices, of any site to which you navigate from the Service or relating to any applications you use or install from the Service. Please specifically note that the Site's mapping technology is provided by Google, Inc. and, in using such technology, you agree to be bound by Google's Terms of Use.

Mobile Software License

Subject to the terms of these Terms of Use, the Company grants you a non-transferable, non-exclusive license to download, install and use one copy of each application constituting the Mobile Software in object code form only on a mobile device that you own or control.

You may not derive or attempt to derive the source code of all or any portion of the Mobile Software, permit any third party to derive or attempt to derive such source code, or reverse engineer, decompile, disassemble, or translate the Mobile Software or any part thereof.

The Company and its licensors own and shall retain all intellectual property rights and other rights in and to the Mobile Software, and any changes, modifications or corrections thereto.

The following terms and conditions apply to you only if you are using Mobile Software from the Apple App Store. To the extent the other terms and conditions of these Terms of Use are less restrictive than, or otherwise conflict with, the terms and conditions of this paragraph, the more restrictive or conflicting terms and conditions in this paragraph apply, but solely with respect to Mobile Software from the Apple App Store. You acknowledge and agree that these Terms of Use are solely between you and the Company, not Apple, and that Apple has no responsibility for the Mobile Software or content thereof. Your use of the Mobile Software must comply with the App Store Terms of Service. You acknowledge that Apple has no obligation whatsoever to furnish any maintenance and support services with respect to the Mobile Software. In the event of any failure of the Mobile Software to conform to any applicable warranty, you may notify Apple, and Apple will refund the purchase price, if any, for the Mobile Software to you; to the maximum extent permitted by applicable law, Apple will have no other warranty obligation whatsoever with respect to the Mobile Software, and any other claims, losses, liabilities, damages, costs or expenses attributable to any failure to conform to any warranty will be solely governed by these Terms of Use. You and the Company acknowledge that Apple is not responsible for addressing any claims of you or any third party relating to the Mobile Software or your possession and/or use of the Mobile Software, including, but not limited to: (i) product

liability claims; (ii) any claim that the Mobile Software fails to conform to any applicable legal or regulatory requirement; and (iii) claims arising under consumer protection or similar legislation. You and the Company acknowledge that, in the event of any third party claim that the Mobile Software or your possession and use of that Mobile Software infringes that third party's intellectual property rights, the Company, not Apple, will be solely responsible for the investigation, defense, settlement and discharge of any such intellectual property infringement claim to the extent required by these Terms of Use. You must comply with applicable third party terms of agreement when using the Mobile Software. You and the Company acknowledge and agree that Apple, and Apple's subsidiaries, are third party beneficiaries of these Terms of Use as they relate to your license of the Mobile Software, and that, upon your acceptance of the Terms of Use, Apple will have the right (and will be deemed to have accepted the right) to enforce these Terms of Use against you as a third party beneficiary thereof.

Reservation of Intellectual Property rights

You do not acquire any right, title or interest in the Service or any Service Content by virtue of accessing the Service or making use of the permitted uses allowed under these Terms of Use. The Company, or its licensors or content providers, retain full and complete title to the Service and the Service Content, including all associated intellectual property rights. The Company neither warrants nor represents that your use of the Service or the Service Content will not infringe rights of third parties.

Trademarks and Copyrights

Trademarks, logos and service marks displayed on the Service are registered and unregistered trademarks of the Company, its licensors or content providers, or other third parties. All of these trademarks, logos and service marks are the property of their respective owners. Nothing on this Service shall be construed as granting, by implication, estoppel, or otherwise, any license or right to use any trademark, logo or service mark displayed on the Service without the owner's prior written permission, except as otherwise described herein. The Company reserves all rights not expressly granted in and to the Service and the Service Content. This Service and the Service Content are protected as a compilation under the copyright laws of the United States and other countries.

The Company is under no obligation to post, forward, transmit, distribute or otherwise provide any material available on this Service, including material you provide to us, and so we have an absolute right to remove any material from the Service in our sole discretion at any time.

Digital Millennium Copyright Act Notice

We are committed to complying with U.S. copyright and related laws, and we require all users of the Service to comply with these laws. Accordingly, you may not disseminate any material or content using the Service in any manner that constitutes an infringement of third party intellectual property rights, including rights granted by U.S. copyright law. Owners of copyrighted works who believe that their rights under U.S. copyright law have been infringed may take advantage of certain provisions of the Digital Millennium Copyright Act of 1998 (the "DMCA") to report alleged infringements. It is our policy in accordance with the DMCA and other applicable laws to reserve the right to terminate the rights of any user to access the Service if any such user is either found to infringe third party copyright or other intellectual property rights, including repeat infringers, or who we believe, in our sole discretion, is infringing these rights. Upon our receipt of a proper notice of claimed infringement under the DCMA, we will respond expeditiously to remove, or disable access to, the material claimed to be infringing and will follow the procedures specified in the DMCA to resolve the claim between the notifying party and the alleged infringer who

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provided the content in issue. Our designated agent (i.e., the proper party) to whom you should address such notice is:

Strategy Network Incorporated

1850 Towers Crescent Plaza

Vienna, Virginia 22182

Attention: General Counsel

DMCA@strategy.com

Phone: 703.848.8600

Fax: 703.848.8610

If you believe that content that you or a third party owns has been used via the Service in a way that violates your or someone else's copyright or other intellectual property rights, please provide us with the following information:

- an electronic or physical signature of the person authorized to act on behalf of the owner of the copyright or other intellectual property interest;
- a description of the copyrighted work or other intellectual property that you claim has been infringed;
- a description of where the material that you claim is infringing is located;
- your address, telephone number, and email address;
- a statement by you that you have a good faith belief that the disputed use is not authorized by the copyright or intellectual property owner, its agent, or the law; and
- a statement by you, made under penalty of perjury, that the information contained in your report is accurate and that you are the copyright or intellectual property owner or authorized to act on the copyright or intellectual property owner's behalf.

DISCLAIMERS

YOUR USE OF THIS SERVICE IS AT YOUR SOLE RISK. THE SERVICE IS PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. WE RESERVE THE RIGHT TO RESTRICT OR TERMINATE YOUR ACCESS TO THE SERVICE OR ANY FEATURE OR PART THEREOF AT ANY TIME. THE COMPANY EXPRESSLY DISCLAIMS ALL WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTIES THAT THE SERVICE OR THE SERVICE CONTENT IS NONINFRINGING, AS WELL AS WARRANTIES IMPLIED FROM A COURSE OF PERFORMANCE OR COURSE OF DEALING; THAT ACCESS TO THE SERVICE WILL BE UNINTERRUPTED OR ERROR-FREE; THAT THE SERVICE WILL BE SECURE; THAT THE SERVICE OR THE SERVER THAT MAKES THE SERVICE AVAILABLE WILL BE VIRUS-FREE; OR THAT INFORMATION ON THE SERVICE WILL BE COMPLETE, ACCURATE OR TIMELY. IF YOU DOWNLOAD ANY MATERIALS FROM THIS SERVICE, YOU DO SO AT YOUR OWN DISCRETION AND RISK. YOU WILL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO YOUR COMPUTER SYSTEM OR LOSS OF DATA THAT RESULTS FROM THE DOWNLOAD OF ANY SUCH MATERIALS. NO ADVICE OR INFORMATION, WHETHER ORAL OR WRITTEN, OBTAINED BY YOU FROM THE COMPANY OR THROUGH OR FROM THE SERVICE SHALL CREATE ANY WARRANTY OF ANY KIND. THE COMPANY DOES NOT MAKE ANY WARRANTIES OR REPRESENTATIONS REGARDING THE USE OF THE MATERIALS ON THIS SERVICE IN TERMS OF THEIR COMPLETENESS, CORRECTNESS, ACCURACY, ADEQUACY, USEFULNESS, TIMELINESS, RELIABILITY OR OTHERWISE.

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IN CERTAIN JURISDICTIONS, THE LAW MAY NOT PERMIT THE DISCLAIMER OF WARRANTIES, SO THE ABOVE DISCLAIMER MAY NOT APPLY TO YOU.

LIMITATION OF LIABILITY

YOU ACKNOWLEDGE AND AGREE THAT YOU ASSUME FULL RESPONSIBILITY FOR YOUR USE OF THE SERVICE. YOU ACKNOWLEDGE AND AGREE THAT ANY INFORMATION YOU SEND OR RECEIVE DURING YOUR USE OF THE SERVICE MAY NOT BE SECURE AND MAY BE INTERCEPTED BY UNAUTHORIZED PARTIES. YOU ACKNOWLEDGE AND AGREE THAT YOUR USE OF THE SERVICE IS AT YOUR OWN RISK AND THAT THE SERVICE IS MADE AVAILABLE TO YOU AT NO CHARGE. RECOGNIZING SUCH, YOU ACKNOWLEDGE AND AGREE THAT, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, NEITHER THE COMPANY NOR ITS AFFILIATES, SUPPLIERS, CUSTOMERS OR THIRD PARTY CONTENT PROVIDERS WILL BE LIABLE FOR ANY DIRECT, INDIRECT, PUNITIVE, EXEMPLARY, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES ARISING OUT OF OR IN ANY WAY RELATED TO THE SERVICE, OR ANY OTHER SITE YOU ACCESS THROUGH A LINK FROM THIS SERVICE OR FROM ANY ACTIONS WE TAKE OR FAIL TO TAKE AS A RESULT OF COMMUNICATIONS YOU SEND TO US, OR THE DELAY OR INABILITY TO USE THE SERVICE, OR FOR ANY INFORMATION, PRODUCTS OR SERVICES ADVERTISED IN OR OBTAINED THROUGH THE SERVICE, THE COMPANY'S REMOVAL OR DELETION OF ANY MATERIALS SUBMITTED OR POSTED ON ITS SERVICE, OR OTHERWISE ARISING OUT OF THE USE OF THE SERVICE, WHETHER BASED ON CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE, EVEN IF THE COMPANY, ITS AFFILIATES OR ANY OF ITS SUPPLIERS HAS BEEN ADVISED OF THE POSSIBILITY OF DAMAGES. THIS DISCLAIMER APPLIES, WITHOUT LIMITATION, TO ANY DAMAGES OR INJURY ARISING FROM ANY FAILURE OF PERFORMANCE, ERROR, OMISSION, INTERRUPTION, DELETION, DEFECTS, DELAY IN OPERATION OR TRANSMISSION, COMPUTER VIRUSES, FILE CORRUPTION, COMMUNICATION-LINE FAILURE, NETWORK OR SYSTEM OUTAGE, YOUR LOSS OF PROFITS, OR THEFT, DESTRUCTION, UNAUTHORIZED ACCESS TO, ALTERATION OF, LOSS OR USE OF ANY RECORD OR DATA, AND ANY OTHER TANGIBLE OR INTANGIBLE LOSS. YOU SPECIFICALLY ACKNOWLEDGE AND AGREE THAT NEITHER THE COMPANY NOR ITS SUPPLIERS SHALL BE LIABLE FOR ANY DEFAMATORY, OFFENSIVE OR ILLEGAL CONDUCT OF ANY USER OF THE SERVICE. YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY OF THE ABOVE CLAIMS OR ANY DISPUTE WITH THE COMPANY IS TO DISCONTINUE YOUR USE OF THE SERVICE. YOU AND THE COMPANY AGREE THAT ANY CAUSE OF ACTION ARISING OUT OF OR RELATED TO THE SERVICE MUST COMMENCE WITHIN ONE (1) YEAR AFTER THE CAUSE OF ACTION ACCRUES OR THE CAUSE OF ACTION IS PERMANENTLY BARRED. BECAUSE SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, ALL OR A PORTION OF THE ABOVE LIMITATION MAY NOT APPLY TO YOU. NOTWITHSTANDING THE FOREGOING, IF WE ARE FOUND TO BE LIABLE TO YOU FOR ANY DAMAGE OR LOSS WHICH ARISES OUT OF OR IS IN ANY WAY CONNECTED WITH YOUR USE OF THE SERVICE OR ANY CONTENT CONTAINED THEREIN, OUR LIABILITY SHALL IN NO EVENT EXCEED U.S. \$5.00.

Indemnification

You agree to indemnify, defend and hold harmless the Company and its affiliates and their officers, directors, employees, contractors, agents, licensors, customers, service providers, subcontractors and suppliers from and against any and all losses, liabilities, expenses, damages and costs, including reasonable attorneys' fees and court costs, arising or resulting from your use of the Service and any violation of these Terms of Use, including, without limitation, (i) your violation of any third party right, including without limitation any

copyright, intellectual property, or privacy right, (ii) any claims that your use of the Service caused damage to a third party, (iii) violations of any and all applicable laws, rules or regulations from any jurisdiction, (iv) your violation of Facebook's Statement of Rights and Responsibilities, Privacy Policy, or other rules or regulations, and (v) your encouragement, assistance or enablement of any third party's violation of any of the provisions, laws, rules, regulations, rights or agreements described above. If you cause a technical disruption of the Service or the systems transmitting the Service to you or others, you agree to be responsible for any and all losses, liabilities, expenses, damages and costs, including reasonable attorneys' fees and court costs, arising or resulting from that disruption. The Company reserves the right, at its own expense, to assume exclusive defense and control of any matter otherwise subject to indemnification by you and, in such case, you agree to cooperate with the Company in the defense of such matter.

Jurisdiction and Applicable Law

The laws of the Commonwealth of Virginia govern these Terms of Use and your use of the Service, and you irrevocably consent to the jurisdiction of the courts located in the County of Fairfax for any action arising out of or relating to these Terms of Use and agree that any action arising out of or relating to these Terms of Use shall be brought exclusively in Virginia. We recognize that it is possible for you to obtain access to this Service from any jurisdiction in the world, but we have no practical ability to prevent such access. This Service has been designed to comply with the laws of the Commonwealth of Virginia and of the United States. If any material on this Service, or your use of the Service, is contrary to the laws of the place where you are when you access it, the Service is not intended for you, and we ask you not to use the Service. You are responsible for informing yourself of the laws of your jurisdiction and complying with them.

Changes to the Service

The Company reserves the right to terminate or modify the Service or to change any Service Content with or without prior notice for any reason. You agree that the Company will not be liable for any discontinuation of or changes to the Service or the Service Content.

Assignment

The Company may assign any of its rights or obligations under these Terms of Use to (a) any subsidiary or affiliate of the Company; (b) any entity that acquires all or substantially all of the assets of the Company; or (c) any entity that acquires all or substantially all of the Company's interest in the Service or the assets related thereto. The Terms of Use (and your account on the Service) are personal to you and may not be transferred or assigned.

Communications

You consent to receive electronic communications from us and agree that email communications to the email address associated with your Facebook account, notices posted on the Service or messages displayed when you enter the Service satisfy any legal requirement that such communications be in writing.

International Users

This Service is controlled and operated within the United States. We make no representation that content, materials or products available on or through the Service are appropriate or available for use outside of the United States. If you access this Service from a location outside the United States, you are responsible for compliance with applicable laws, including U.S. export laws and regulations. By using this site and

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submitting any personal information, visitors from outside of the United States acknowledge that this site is subject to U.S. law, consent to the transfer of personal data to the U.S., and waive any claims that may arise under their own national laws.

Additionally, you agree to comply with all local rules regarding online conduct and acceptable User Content. Specifically, you agree to comply with all applicable laws regarding the transmission of technical data exported from the United States or the country in which you reside.

Entire Agreement and Admissibility

This agreement and any policies or operating rules posted on this Service, including the Service's Privacy Policy, constitute the entire agreement and understanding between you and the Company with respect to the subject matter thereof and supersede all prior or contemporaneous communications and proposals, whether oral or written, between the parties with respect to such subject matter. A printed version of these Terms of Use shall be admissible in judicial or administrative proceedings based on or relating to use of the Service to the same extent and subject to the same conditions as other business documents and records originally generated and maintained in printed form.

Severability

If any provision of this agreement is unlawful, void or unenforceable, the remaining provisions of the agreement will remain in place.

How to Contact Us

If you have any questions or comments about these Terms of Use or this Service, please contact us at: support@alert.com.

Appendix D – Emma, the Friendly Marketplace Privacy Policy

Below is the Emma policy, as captured by the Wayback Machine on July 24, 2012.¹²²

EMMA Privacy Policy

We at **Strategy Network Incorporated** (“we” or the “Company”) respect your privacy and value the relationship we have with you. This Privacy Policy is designed to show you what information about you we collect through the EMMA Application on the social network operated by Facebook (the “Facebook Application”) and the related mobile device software applications (the “Mobile Software” and together with the Facebook Application and the Mobile Software, the “Service”), and how we use and share that information. Your use of Facebook in general and your relationship with Facebook are subject to Facebook’s own Privacy Policy and Facebook’s other terms and policies, which we strongly recommend that you review before you start using the

¹²² <https://web.archive.org/web/20120724144604/http://www.emma.com/privacy-policy-basic.html>

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Service. We do not control and are not responsible for Facebook's processing of your information.

Information We Collect About You

The Service enables you to make and respond to a wide variety of opportunities to engage with other Facebook users. These engagements may include invitations to exclusive social events, offers to participate in sports leagues, or opportunities to meet with other people interested in similar subject matters. In order to allow you and those users you engage with to verify each others' identities and validate your interest in making and responding to offers, the Application enables you to make certain of your personal information and content from your Facebook profile ("Facebook Information") available to other users. In order to facilitate this process, when you use the Application, we may collect any Facebook Information you have made visible to "Everyone" on Facebook as well as the information Facebook designates as your publicly available information. This includes your:

- name
- profile picture
- gender
- current city
- networks
- friend list
- pages

When first using the Service, you will also be asked to grant us access to additional Facebook Information that you are allowed to share under Facebook's policies. Currently, we ask that you share the following information:

- your contact information, including your email address, phone number and mailing address
- your profile information
- photos and videos you have uploaded to Facebook
- your custom friend lists
- your family members and relationship details and status
- information about your friends

If you have agreed to grant another user of the Application access to your Facebook Information, we may access it and make it available to such user at times when you are not actively using the Application. Even if you have not explicitly allowed us access to any of your Facebook Information, we may collect information about you when your friends on Facebook allow access to and use the Service, subject to your Facebook settings. We may also send you emails and post on your Facebook Wall in connection with your use of the Service. In addition to the Facebook Information, we may collect information we receive from you in connection with your requests for customer support, your user feedback or other communications you direct to us. Any such information will be treated in the same manner as Facebook Information.

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Information We Collect When You Access the Service on a Mobile Device

When you use the Mobile Software on your mobile telephone or other mobile device, we collect your unique device identifier, IP address and location ("Mobile Information" and together with Facebook Information "User Information").

To log into the Mobile Software, you must input your email address and Facebook password. This Facebook login information is collected directly by Facebook as part of the login process and does not pass through our servers.

How We Use Your Facebook Information

We may use your Facebook Information for the following purposes:

- to enable you to use the Application, including on a mobile device through one of our mobile applications, to make your Facebook Information available to other users of the Application
- to post on your Wall or to send you emails regarding your use of the Service
- to provide technical support and to respond to your inquiries
- to communicate about new features or promotions of the Service
- to prevent fraud or potentially illegal activities and to enforce our Terms of Use
- to resolve disputes and troubleshoot problems
- to solicit your feedback to improve the Service and your experience using it
- to administer and improve the Service

We will not sell your personally identifiable Facebook Information to advertisers or spammers.

How We Use Your Mobile Information

We may use your Mobile Information to keep track of your activity levels and location in order to improve the level of service you receive from the Service.

How We Share Your User Information

We may share your User Information in the following cases:

With other Users of the Application:

We may share your Facebook Information with other users of the Application with your consent. We will only make available to a user of the Application that Facebook Information that you have specifically authorized such user to access. Once you have granted another user access to your Facebook Information, such user will continue to have access to such information until you request that we remove such access or you uninstall the Application. If you request that we stop another user's access to your Facebook Information, we will do so as soon as reasonably possible.

With Affiliates and Third-Party Service Providers:

We may disclose your Facebook Information to our affiliates and third-party service providers to the extent permitted by Facebook. We may also disclose your Mobile Information to such third parties. Third parties are not authorized by us to use or disclose your User Information except as necessary to perform services on our behalf or comply with legal requirements.

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With Your Consent:

We may share your User Information with other third parties with your consent.

As Required by Law:

We may disclose any User Information we deem necessary, in our sole discretion, to comply with any applicable law, regulation, legal process or governmental request.

To Prevent Harm or Loss:

We may disclose User Information when we believe, in our sole discretion, disclosure is necessary or appropriate to prevent physical harm or financial loss or in connection with suspected or actual illegal activity.

In Connection With a Sale of Our Business:

We also reserve the right to transfer User Information in the event we sell or transfer all or a portion of our business or assets. Should such a sale or transfer occur, we will use reasonable efforts to direct the transferee to use the User Information in a manner that is consistent with this Privacy Policy. Following such a sale or transfer, you may contact the entity to which we transferred the User Information with any inquiries concerning the processing of that information.

We will not provide personally identifiable User Information to third parties for their use in marketing their products or services to you without your consent, but we do not control and are not responsible for Facebook's own use of content and information it collects in relation to this Service. We may use and share with third parties aggregated and anonymized information to show general demographic and preference information among users of the Service and to deliver within the Service targeted advertising about other products and services.

How We Protect Your User Information

We maintain administrative, technical and physical safeguards designed to protect the User Information that we collect about you against accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use. While we cannot guarantee that no accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use of your information will occur, we try to prevent such occurrences.

Transfers of User Information to Other Countries

The Company uses databases located in different jurisdictions. We may transfer User Information we collect about you to our databases outside your country of residence. Even if the laws in the country to which the information is transferred do not require us to provide adequate protection for your data, we will nevertheless seek to ensure that information transferred to such country is adequately protected.

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Your Privacy Rights and Choices

You may stop the Service from using your User Information at any time by (i) uninstalling the Facebook Application and setting your Facebook privacy settings to prevent the Service from accessing your Facebook Information through your friends or (ii) by deleting your Facebook account. Subject to applicable law, we provide you with access to the User Information we have retained about you and the ability to review, correct, update, block or delete the information where it is inaccurate. Subject to applicable law, we may limit or deny access to your User Information where providing such access is unreasonably burdensome or expensive under the circumstances. Please submit your request to the address specified in the “How to Contact Us” section below.

Updates to This Privacy Policy

This Privacy Policy may be updated periodically and without prior notice to you to reflect changes in our information processing practices or for any other purpose. We will post a notice in the Info section of the Service’s profile to notify you of any significant changes to the Privacy Policy and indicate there and at the top of the Privacy Policy when it was most recently updated.

How to Contact Us

If you have any questions or comments about this Privacy Policy, please contact us by email at support@emma.com or telephone at 703-744-6529. You also may write to us at Strategy Network, 1850 Towers Crescent Plaza, Vienna, Virginia 22182, Attn: Office of the General Counsel. Questions or comments submitted through other means, such as Wall posts, may not be received or addressed.

Appendix E – Usher for Managing Events Privacy Policy

Below is the Usher for Managing Events privacy policy, as captured by the Wayback Machine on March 28, 2013.¹²³

Usher™ for Managing Events Privacy Policy

The Usher™ for Managing Events Service collects personally identifiable information from you solely to operate the Service as described in the “How We Use Your User Information” section below. We will not sell your personally identifiable information to advertisers or spammers. We will only share the information we collect from you as described in the section below entitled “How We Share Your User Information.”

We at **Microstrategy Enterprises, Inc.** (“we” or the “Company”), a subsidiary of Microstrategy Incorporated, respect your privacy and value the relationship we have with you. This Privacy Policy is designed to show you what information about you we collect through the Usher for Managing Events Application on the social network operated by Facebook (the “Facebook Application”), the related mobile device software applications (the “Mobile Software”) and the Usher for Managing Events website at usherevents.com (together with the Facebook Application and the Mobile Software, the “Service”), and how we use and share that information. Your use of Facebook in general and your relationship with Facebook are subject to Facebook's own Privacy Policy and Facebook's other terms and policies, which we strongly recommend that you review before you start using the Service. We do not control and are not responsible for Facebook's processing of your information.

Information We Collect About You

The Service facilitates the creation of events and the management of groups and event memberships and invitations (including member/invitee validation), the creation and viewing of communications among members or invitees, and the creation, tracking and management of ticketing for events. In order to facilitate these processes, the Service may collect personal information and content that was provided by you or other users to Facebook or was associated by Facebook with a particular user (“Facebook Information”). When you use the Service, we may collect any Facebook Information you have made visible to “Everyone” on Facebook as well as the information Facebook designates as your publicly available information. This includes your:

- name
- current city

¹²³ <https://web.archive.org/web/20130328204407/http://www.usherevents.com/privacy-policy/>

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- networks
- friend list
- pages

When first using the Service, you will be asked to provide a profile picture unique from your Facebook profile picture allowing other users of the Service to confirm your identity by viewing a clear picture of your face. You will also be asked to grant us access to additional Facebook Information that you are allowed to share under Facebook's policies. Currently, we ask that you share all information that you are allowed to share under Facebook policies. This information includes:

- your contact information, including your email address, phone number and mailing address
- your profile information
- posts in your newsfeed
- photos and videos you have uploaded to Facebook
- your calendar of events
- your personally created events
- your custom friend lists
- your online presence
- your "check-ins" and friends' "check-ins"
- your family members and relationship details and status
- information about your friends

Even if you have not explicitly allowed us access to any of your Facebook Information, we may collect information about you when your friends on Facebook allow access to and use the Service, subject to your Facebook settings. We may also send you emails and post on your Facebook Wall in connection with your use of the Service. In addition to the Facebook Information, we may collect information we receive from you in connection with your requests for customer support, your user feedback or other communications you direct to us. We may also collect information related to your usage of the Service, such as how often you log into the Service and what functions of the Service you use the most frequently. Any such information will be treated in the same manner as Facebook Information.

Information We Collect When You Access the Service on a Mobile Device

When you use the Mobile Software on your mobile telephone or other mobile device, we collect your unique device identifier, IP address and your location ("Mobile Information" and together with Facebook Information "User Information").

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Mobile Log-In Information

To log into the Mobile Software, you must input your email address and Facebook password. This Facebook login information is collected directly by Facebook as part of the login process and does not pass through our servers.

How We Use Your User Information

The Company will only use your User Information for the following purposes:

- to enable you to use the Service to organize events and distribute corresponding tickets to those events
- to authenticate your identity to other users
- to post on your Wall or to send you emails regarding your use of the Service
- to provide technical support and to respond to your inquiries
- to communicate about new features or promotions of the Service
- to prevent fraud or potentially illegal activities and to enforce our Terms of Use
- to solicit your feedback to improve the Service and your experience using it
- to administer and improve the Service
- to keep track of your activity patterns , preferences and location in order to improve the level of service you receive from the Service (we may use your Mobile Information for this purpose)

We will not sell your personally identifiable User Information to anyone, including advertisers or spammers. You may choose to not receive communications from us about new features or promotions of the Service by opting out of such communications

How We Share Your User Information

We may share your User Information in the following cases:

- **With Affiliates and Third-Party Service Providers:** We may disclose your User Information to our affiliates and third-party service providers to the extent permitted by Facebook. Except as otherwise set forth in this section, we will only share your User Information with any such parties in connection with the administration of the Service or for the purpose of improving your experience with the Service. Third party service providers are not authorized by us to use or disclose your User Information except as necessary to perform services on our behalf or comply with legal requirements.
- **With Your Consent:** We may share your User Information with other third parties with your consent.
- **As Required by Law:** We may disclose any User Information we deem necessary, in our sole discretion, to comply with any applicable law, regulation, legal process or governmental request.

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- To Prevent Harm or Loss: We may disclose User Information when we believe, in our sole discretion, disclosure is necessary or appropriate to prevent physical harm or financial loss or in connection with suspected or actual illegal activity.
- In Connection With a Sale of Our Business: We also reserve the right to transfer User Information in the event we sell or transfer all or a portion of our business or assets. Should such a sale or transfer occur, we will use reasonable efforts to direct the transferee to use the User Information in a manner that is consistent with this Privacy Policy. Following such a sale or transfer, you may contact the entity to which we transferred the User Information with any inquiries concerning the processing of that information.

We will not provide personally identifiable User Information to third parties for their use in marketing their products or services to you, but we do not control and are not responsible for Facebook's own use of content and information it collects in relation to this Service.

How We Protect Your User Information

We maintain administrative, technical and physical safeguards designed to protect the User Information that we collect about you against accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use. While we cannot guarantee that no accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use of your information will occur, we will work hard to prevent any such occurrences.

Transfers of User Information to Other Countries

The Company uses databases located in different jurisdictions. We may transfer User Information we collect about you to our databases outside your country of residence. Even if the laws in the country to which the information is transferred do not require us to provide adequate protection for your data, we will nevertheless seek to ensure that information transferred to such country is adequately protected.

Your Privacy Rights and Choices

You may stop the Service from using your User Information at any time by (i) uninstalling the Facebook Application and setting your Facebook privacy settings to prevent the Service from accessing your Facebook Information through your friends or (ii) deleting your Facebook account. Following your de-installation of the Service or deletion of your Facebook account, certain of your information may still be preserved in a non-personally identifiable form as part of aggregate historical data reports used by the Company.

Subject to applicable law, we provide you with access to the User Information we have retained about you and the ability to review, correct, update, block or delete the information where it is

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inaccurate. Subject to applicable law, we may limit or deny access to your User Information where providing such access is unreasonably burdensome or expensive under the circumstances. Please submit your request to the address specified in the “How to Contact Us” section below.

Updates to This Privacy Policy

This Privacy Policy may be updated periodically and without prior notice to you to reflect changes in our information processing practices or for any other purpose. We will post a notice in the Info section of the Service’s profile to notify you of any significant changes to the Privacy Policy and indicate there and at the top of the Privacy Policy when it was most recently updated.

How to Contact Us

If you have any questions or comments about this Privacy Policy, please contact us by email at support@usher.com or telephone at 703-744-6529. You also may write to us at Microstrategy Enterprises, Inc., 1850 Towers Crescent Plaza, Tysons Corner, Virginia 22182, Attn: Office of the General Counsel. Questions or comments submitted through other means, such as Wall posts, may not be received or addressed.

Appendix F - Wisdom Privacy Policy 2011

Below is the Wisdom privacy policy, as captured by the Wayback Machine on May 23, 2011:¹²⁴

Privacy Policy

The Wisdom Service collects personally identifiable information from you solely to operate the Service as described in the “How We Use Your User Information” section below. We will not sell your personally identifiable information to advertisers or spammers. We will only share the information we collect from you as described in the section below entitled “How We Share Your User Information.”

We at **Strategy Network Incorporated** (“we” or the “Company”) respect your privacy and value the relationship we have with you. This Privacy Policy is designed to show you what information about you we collect through the Wisdom Application on the social network operated by Facebook (the “Facebook Application”), the related mobile device software applications (the “Mobile Software”) and the Wisdom website at wisdom.com (together with the Facebook Application and the Mobile Software, the “Service”), and how we use and share that information. Your use of Facebook in general and your relationship with Facebook are subject to Facebook’s own Privacy Policy and Facebook’s other terms and policies, which we strongly recommend that you review before you start using the Service. We do not control and are not responsible for Facebook’s processing of your information.

Information We Collect About You

The Service enables you to perform powerful and interesting analyses of your network of friends and of the content available within that network. In order to facilitate this process, the Service may collect personal information and content that was provided by you or other users to Facebook or was associated by Facebook with a particular user (“Facebook Information”). When you use the Service, we may collect any Facebook Information you have made visible to “Everyone” on Facebook as well as the information Facebook designates as your publicly available information. This includes your:

- name
- profile picture
- gender
- current city
- networks
- friend list
- pages

¹²⁴ <https://web.archive.org/web/20110523090713/http://wisdom.com:80/privacy-policy.html>

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When first using the Service, you will also be asked to grant us access to additional Facebook Information that you are allowed to share under Facebook's policies. Currently, we ask that you share all information that you are allowed to share under Facebook policies. This information includes:

- your contact information, including your email address, phone number and mailing address
- items you have "liked"
- your profile information
- posts in your newsfeed
- photos and videos you have uploaded to Facebook
- your calendar of events
- your custom friend lists
- your online presence
- your "check-ins" and friends' "check-ins"
- your family members and relationship details and status
- information about your friends

Even if you have not explicitly allowed us access to any of your Facebook Information, we may collect information about you when your friends on Facebook allow access to and use the Service, subject to your Facebook settings. We may also send you emails and post on your Facebook Wall in connection with your use of the Service. In addition to the Facebook Information, we may collect information we receive from you in connection with your requests for customer support, your user feedback or other communications you direct to us. Any such information will be treated in the same manner as Facebook Information.

Information We Collect When You Access the Service on a Mobile Device

When you use the Mobile Software on your mobile telephone or other mobile device, we collect your unique device identifier, IP address and your location ("Mobile Information" and together with Facebook Information "User Information").

Mobile Log-In Information

To log into the Mobile Software, you must input your email address and Facebook password. This Facebook login information is collected directly by Facebook as part of the login process and does not pass through our servers.

How We Use Your User Information

The Company will only use your User Information for the following purposes:

- to enable you to use the Service to analyze your network of friends and the content available within your network

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- if your Facebook privacy settings allow such access, to enable your friends to use the Service to analyze their network of friends and the content available within their networks
- to post on your Wall or to send you emails regarding your use of the Service
- to provide technical support and to respond to your inquiries
- to communicate about new features or promotions of the Service
- to prevent fraud or potentially illegal activities and to enforce our Terms of Use
- to solicit your feedback to improve the Service and your experience using it
- to administer and improve the Service
- to keep track of your activity levels and location in order to improve the level of service you receive from the Service (we may use your Mobile Information for this purpose)

We will not sell your personally identifiable User Information to advertisers or spammers.

How We Share Your User Information

We may share your User Information in the following cases:

- **With Affiliates and Third-Party Service Providers:** We may disclose your User Information to our affiliates and third-party service providers to the extent permitted by Facebook. Except as otherwise set forth in this section, we will only share your User Information with any such parties in connection with the administration of the Service or for the purpose of improving your experience with the Service. Third party service providers are not authorized by us to use or disclose your User Information except as necessary to perform services on our behalf or comply with legal requirements.
- **With Your Consent:** We may share your User Information with other third parties with your consent.
- **As Required by Law:** We may disclose any User Information we deem necessary, in our sole discretion, to comply with any applicable law, regulation, legal process or governmental request.
- **To Prevent Harm or Loss:** We may disclose User Information when we believe, in our sole discretion, disclosure is necessary or appropriate to prevent physical harm or financial loss or in connection with suspected or actual illegal activity.
- **In Connection With a Sale of Our Business:** We also reserve the right to transfer User Information in the event we sell or transfer all or a portion of our business or assets. Should such a sale or transfer occur, we will use reasonable efforts to direct the transferee to use the User Information in a manner that is consistent with this Privacy Policy. Following such a sale or transfer, you may contact the

entity to which we transferred the User Information with any inquiries concerning the processing of that information.

We will not provide personally identifiable User Information to third parties for their use in marketing their products or services to you, but we do not control and are not responsible for Facebook's own use of content and information it collects in relation to this Service.

How We Protect Your User Information

We maintain administrative, technical and physical safeguards designed to protect the User Information that we collect about you against accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use. While we cannot guarantee that no accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use of your information will occur, we try to prevent such occurrences.

Transfers of User Information to Other Countries

The Company uses databases located in different jurisdictions. We may transfer User Information we collect about you to our databases outside your country of residence. Even if the laws in the country to which the information is transferred do not require us to provide adequate protection for your data, we will nevertheless seek to ensure that information transferred to such country is adequately protected.

Your Privacy Rights and Choices

You may stop the Service from using your User Information at any time by (i) uninstalling the Facebook Application and setting your Facebook privacy settings to prevent the Service from accessing your Facebook Information through your friends or (ii) by deleting your Facebook account. Subject to applicable law, we provide you with access to the User Information we have retained about you and the ability to review, correct, update, block or delete the information where it is inaccurate. Subject to applicable law, we may limit or deny access to your User Information where providing such access is unreasonably burdensome or expensive under the circumstances. Please submit your request to the address specified in the "How to Contact Us" section below.

Updates to This Privacy Policy

This Privacy Policy may be updated periodically and without prior notice to you to reflect changes in our information processing practices or for any other purpose. We will post a notice in the Info section of the Service's profile to notify you of any significant changes to the Privacy Policy and indicate there and at the top of the Privacy Policy when it was most recently updated.

How to Contact Us

If you have any questions or comments about this Privacy Policy, please contact us by email at support@wisdom.com or telephone at 703-744-6529. You also may write to

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us at Strategy Network, 1850 Towers Crescent Plaza, Vienna, Virginia 22182, Attn: Office of the General Counsel. Questions or comments submitted through other means, such as Wall posts, may not be received or addressed.

Last revised on May 9, 2011

Appendix G - Wisdom privacy policy, as captured in 2012¹²⁵

Below is the Wisdom privacy policy, last revised on November 8, 2011, and captured by the Wayback Machine on January 3, 2012.

The Wisdom™ Service collects personally identifiable information from you solely to operate the Service as described in the “How We Use Your User Information” section below. We will not sell your personally identifiable information to advertisers or spammers. We will only share the information we collect from you as described in the section below entitled “How We Share Your User Information.”

We at **Strategy Network Incorporated** (“we” or the “Company”) respect your privacy and value the relationship we have with you. This Privacy Policy is designed to show you what information about you we collect through the Wisdom Application on the social network operated by Facebook (the “Facebook Application”), the related mobile device software applications (the “Mobile Software”) and the Wisdom website at wisdom.com (together with the Facebook Application and the Mobile Software, the “Service”), and how we use and share that information. Your use of Facebook in general and your relationship with Facebook are subject to Facebook’s own Privacy Policy and Facebook’s other terms and policies, which we strongly recommend that you review before you start using the Service. We do not control and are not responsible for Facebook’s processing of your information.

Information We Collect About You

The Service enables you to perform powerful and interesting analyses of your network of friends through the collective intelligence feature, the entire network of Wisdom users. In order to facilitate this process, the Service may collect personal information and content that was provided by you or other users to Facebook or was associated by Facebook with a particular user (“Facebook Information”). When you use the Service, we may collect any Facebook Information you have made visible to “Everyone” on Facebook as well as the information Facebook designates as your publicly available information. This includes your:

- name
- profile picture
- gender
- current city
- networks
- friend list
- pages

When first using the Service, you will also be asked to grant us access to additional

¹²⁵ <https://web.archive.org/web/20120103170435/http://wisdom.com/privacy-policy.html>

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Facebook Information that you are allowed to share under Facebook's policies. Currently, we ask that you share all information that you are allowed to share under Facebook policies. This information includes:

- your contact information, including your email address, phone number and mailing address
- items you have "liked"
- your profile information
- posts in your newsfeed
- photos and videos you have uploaded to Facebook
- your calendar of events
- your custom friend lists
- your online presence
- your "check-ins" and friends' "check-ins"
- your family members and relationship details and status
- information about your friends

Even if you have not explicitly allowed us access to any of your Facebook Information, we may collect information about you when your friends on Facebook allow access to and use the Service, subject to your Facebook settings. We may also send you emails and post on your Facebook Wall in connection with your use of the Service. In addition to the Facebook Information, we may collect information we receive from you in connection with your requests for customer support, your user feedback or other communications you direct to us. Any such information will be treated in the same manner as Facebook Information.

Information We Collect When You Access the Service on a Mobile Device

When you use the Mobile Software on your mobile telephone or other mobile device, we collect your unique device identifier, IP address and your location ("Mobile Information" and together with Facebook Information "User Information").

Mobile Log-In Information

To log into the Mobile Software, you must input your email address and Facebook password. This Facebook login information is collected directly by Facebook as part of the login process and does not pass through our servers.

How We Use Your User Information

The Company will only use your User Information for the following purposes:

- to enable you to use the Service to analyze your network of friends and the content available within your network

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- to enable you and other users of the Service to use the collective intelligence feature to analyze the User Information of the Service's entire network of users, provided that your User Information will only be accessible through the collective intelligence feature in aggregate form, anonymized form, or after removing your and your Facebook friends' names, photos, videos and contact information
- if your Facebook privacy settings allow such access, to enable your friends to use the Service to analyze their network of friends and the content available within their networks
- to post on your Wall or to send you emails regarding your use of the Service
- to provide technical support and to respond to your inquiries
- to communicate about new features or promotions of the Service
- to prevent fraud or potentially illegal activities and to enforce our Terms of Use
- to solicit your feedback to improve the Service and your experience using it
- to administer and improve the Service
- to keep track of your activity levels and location in order to improve the level of service you receive from the Service (we may use your Mobile Information for this purpose)

We will not sell your personally identifiable User Information to advertisers or spammers.

How We Share Your User Information

We may share your User Information in the following cases:

- **With Affiliates and Third-Party Service Providers:** We may disclose your User Information to our affiliates and third-party service providers to the extent permitted by Facebook. Except as otherwise set forth in this section, we will only share your User Information with any such parties in connection with the administration of the Service or for the purpose of improving your experience with the Service. Third party service providers are not authorized by us to use or disclose your User Information except as necessary to perform services on our behalf or comply with legal requirements.
- **With Other Users of the Service:** We may share your User Information with other users of the Service through the collective intelligence feature to enable them to analyze the User Information of the Service's entire network of users, provided that your User Information will only be accessible through the collective intelligence feature in aggregate form, anonymized form, or after removing your and your Facebook friends' names, photos, videos and contact information.
- **In Connection with Product Demonstrations:** We may share your User Information in demonstration versions of the Service and of other products and services of ours and our affiliates, including publicly available demonstration versions, provided that we will only share your User Information in such

demonstrations in aggregate form, anonymized form, or after removing your and your Facebook friends' names, photos, videos and contact information.

- **With Your Consent:** We may share your User Information with other third parties with your consent.
- **As Required by Law:** We may disclose any User Information we deem necessary, in our sole discretion, to comply with any applicable law, regulation, legal process or governmental request.
- **To Prevent Harm or Loss:** We may disclose User Information when we believe, in our sole discretion, disclosure is necessary or appropriate to prevent physical harm or financial loss or in connection with suspected or actual illegal activity.
- **In Connection With a Sale of Our Business:** We also reserve the right to transfer User Information in the event we sell or transfer all or a portion of our business or assets. Should such a sale or transfer occur, we will use reasonable efforts to direct the transferee to use the User Information in a manner that is consistent with this Privacy Policy. Following such a sale or transfer, you may contact the entity to which we transferred the User Information with any inquiries concerning the processing of that information.

We will not provide personally identifiable User Information to third parties for their use in marketing their products or services to you, but we do not control and are not responsible for Facebook's own use of content and information it collects in relation to this Service.

How We Protect Your User Information

We maintain administrative, technical and physical safeguards designed to protect the User Information that we collect about you against accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use. While we cannot guarantee that no accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use of your information will occur, we try to prevent such occurrences.

Transfers of User Information to Other Countries

The Company uses databases located in different jurisdictions. We may transfer User Information we collect about you to our databases outside your country of residence. Even if the laws in the country to which the information is transferred do not require us to provide adequate protection for your data, we will nevertheless seek to ensure that information transferred to such country is adequately protected.

Your Privacy Rights and Choices

You may stop the Service from using your User Information at any time by (i) uninstalling the Facebook Application and setting your Facebook privacy settings to prevent the Service from accessing your Facebook Information through your friends or (ii) by deleting your Facebook account. Subject to applicable law, we provide you with access to the User Information we have retained about you and the ability to review,

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correct, update, block or delete the information where it is inaccurate. Subject to applicable law, we may limit or deny access to your User Information where providing such access is unreasonably burdensome or expensive under the circumstances. Please submit your request to the address specified in the “How to Contact Us” section below.

Updates to This Privacy Policy

This Privacy Policy may be updated periodically and without prior notice to you to reflect changes in our information processing practices or for any other purpose. We will post a notice in the Info section of the Service’s profile to notify you of any significant changes to the Privacy Policy and indicate there and at the top of the Privacy Policy when it was most recently updated.

How to Contact Us

If you have any questions or comments about this Privacy Policy, please contact us by email at support@wisdom.com or telephone at 703-744-6529. You also may write to us at Strategy Network, 1850 Towers Crescent Plaza, Tysons Corner, Virginia 22182, Attn: Office of the General Counsel. Questions or comments submitted through other means, such as Wall posts, may not be received or addressed.

Appendix H - Wisdom Privacy Policy 2012

Below is the Wisdom privacy policy, last revised on June 10, 2012, and captured by the Wayback Machine on June 13, 2012.

Privacy Policy

Last revised on June 10, 2012.

The Wisdom Service collects personally identifiable information from you solely for the purposes described in the “How We Use Your User Information” section below. We will not sell your personally identifiable information to advertisers or spammers. We will only share the information we collect from you as described in the section below entitled “How We Share Your User Information.”

We at MicroStrategy Enterprises, Inc., previously known as “Strategy Network Incorporated” (“we” or the “Company”), a subsidiary of MicroStrategy Incorporated, respect your privacy and value the relationship we have with you. This Privacy Policy is designed to show you what information about you we collect through the Wisdom Application on the social network operated by Facebook (the “Facebook Application”), the related mobile device software applications (the “Mobile Software”) and the Wisdom website at wisdom.com (together with the Facebook Application and the Mobile Software, the “Wisdom Service”), and how we use and share that information. Your use of Facebook in general and your relationship with Facebook are subject to Facebook’s own Privacy Policy and Facebook’s other terms and policies, which we strongly recommend that you review before you start using the Wisdom Service. We do not control and are not responsible for Facebook’s processing of your information.

Information We Collect About You

The Wisdom Service enables you to perform powerful and interesting analyses of your network of friends and, through the collective intelligence feature, including options for enhanced analyses such as Wisdom Professional, the entire network of Wisdom users. In order to facilitate these processes, the Wisdom Service may collect personal information and content that was provided by you or other users to Facebook or was associated by Facebook with a particular user (“Facebook Information”). When you use the Wisdom Service, we may collect any Facebook Information you have made visible to “Everyone” on Facebook as well as the information Facebook designates as your publicly available information. This includes your:

- name
- profile picture
- gender
- current city
- networks
- friend list
- pages

When first using the Wisdom Service, you will also be asked to grant us access to additional Facebook Information that you are allowed to share under Facebook's policies. Currently, we ask that you share all information that you are allowed to share under Facebook policies. This information includes:

- your contact information, including your email address, phone number and mailing address
- items you have "liked"
- your profile information
- posts in your newsfeed
- photos and videos you have uploaded to Facebook
- your calendar of events
- your custom friend lists
- your online presence
- your "check-ins" and friends' "check-ins"
- your family members and relationship details and status
- information about your friends

Even if you have not explicitly allowed us access to any of your Facebook Information, we may collect information about you when your friends on Facebook allow access to and use the Wisdom Service, subject to your Facebook settings. We may also send you emails and post on your Facebook Wall in connection with your use of the Wisdom Service. In addition to the Facebook Information, we may collect information we receive from you in connection with your requests for customer support, your user feedback or other communications you direct to us. We may also collect information related to your usage of the Wisdom Service, such as how often you log into the Wisdom Service and what functions of the Wisdom Service you use the most frequently. Any such information will be treated in the same manner as Facebook Information.

Information We Collect When You Access the Wisdom Service on a Mobile Device

When you use the Mobile Software on your mobile telephone or other mobile device, we collect your unique device identifier, IP address and your location ("Mobile Information" and together with Facebook Information "User Information").

Mobile Log-In Information

To log into the Mobile Software, you must input your email address and Facebook password. This Facebook login information is collected directly by Facebook as part of the login process and does not pass through our servers.

How We Use Your User Information

The Company will only use your User Information for the following purposes:

- to enable you to use the Wisdom Service to analyze your network of friends and the content available within your network

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- to enable you and other users of the Wisdom Service to use the collective intelligence feature, including options such as Wisdom Professional, to analyze the User Information of the Wisdom Service's entire network of users, provided that your User Information will only be accessible through the collective intelligence feature in aggregate form, anonymized form, or after removing your and your Facebook friends' names, photos, videos and contact information
- if your Facebook privacy settings allow such access, to enable your friends to use the Wisdom Service to analyze their network of friends and the content available within their networks
- to post on your Wall or to send you emails regarding your use of the Wisdom Service
- to provide technical support and to respond to your inquiries
- to communicate about new features or promotions of the Wisdom Service
- to prevent fraud or potentially illegal activities and to enforce our Terms of Use
- to solicit your feedback to improve the Wisdom Service and your experience using it
- to administer and improve the Wisdom Service
- to keep track of your activity patterns, preferences and location in order to improve the level of service you receive from the Wisdom Service (we may use your Mobile Information for this purpose)
- to conduct research and analysis to enable us to improve the Wisdom Service and develop and improve other products and services of ours and our affiliates
- to promote the Wisdom Service and other products and services of ours and our affiliates, including in private and publicly available product demonstrations and in communications with social media partners, media outlets and other third parties, provided that your User Information will only be used in such promotions in aggregate form, anonymized form, or after removing your and your Facebook friends' names, photos, videos and contact information

Some of our Wisdom Service functionality is available only to Users who pay a fee, and we may require payment of a fee for the ability to use other Wisdom Service functionality in the future. We will not sell your personally identifiable User Information to anyone, including advertisers or spammers. You may choose to not receive communications from us about new features or promotions of the Wisdom Service by opting out of such communications.

How We Share Your User Information

We may share your User Information in the following cases:

- **With Affiliates and Third-Party Service Providers:** We may disclose your User Information to our affiliates and third-party service providers to the extent permitted by Facebook. Except as otherwise set forth in this section, we will only share your User Information with any such parties in connection with the administration of the Wisdom Service or for the purpose of improving your

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experience with the Wisdom Service. Third party service providers are not authorized by us to use or disclose your User Information except as necessary to perform services on our behalf or comply with legal requirements.

- **With other Users of the Wisdom Service:** We may share your User Information with other users of the Wisdom Service through the collective intelligence feature, including options such as Wisdom Professional, to enable them to analyze the User Information of the Wisdom Service's entire network of users, provided that your User Information will only be accessible through the collective intelligence feature in aggregate form, anonymized form, or after removing your and your Facebook friends' names, photos, videos and contact information.
- **In Connection with Promotions:** We may share your User Information in order to promote the Wisdom Service and other products and services of ours and our affiliates, including in private and publicly available product demonstrations and in communications with social media partners, media outlets and other third parties, provided that we will only share your User Information in such promotional efforts in aggregate form, anonymized form, or after removing your and your Facebook friends' names, photos, videos and contact information.
- **With Your Consent:** We may share your User Information with third parties with your consent.
- **As Required by Law:** We may disclose any User Information we deem necessary, in our sole discretion, to comply with any applicable law, regulation, legal process or governmental request.
- **To Prevent Harm or Loss:** We may disclose User Information when we believe, in our sole discretion, disclosure is necessary or appropriate to prevent physical harm or financial loss or in connection with suspected or actual illegal activity.
- **In Connection With a Sale of Our Business:** We also reserve the right to transfer User Information in the event we sell or transfer all or a portion of our business or assets. Should such a sale or transfer occur, we will use reasonable efforts to direct the transferee to use the User Information in a manner that is consistent with this Privacy Policy. Following such a sale or transfer, you may contact the entity to which we transferred the User Information with any inquiries concerning the processing of that information.

We will not provide personally identifiable User Information to third parties for their use in marketing their products or services to you, but we do not control and are not responsible for Facebook's own use of content and information it collects in relation to this Wisdom Service.

How We Protect Your User Information

We maintain administrative, technical and physical safeguards designed to protect the User Information that we collect about you against accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use. While we cannot guarantee that no accidental, unlawful or unauthorized destruction, loss, alteration, access, disclosure or use of your information will occur, we will work hard to prevent any such occurrences.

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Transfers of User Information to Other Countries

The Company uses databases located in different jurisdictions. We may transfer User Information we collect about you to our databases outside your country of residence. Even if the laws in the country to which the information is transferred do not require us to provide adequate protection for your data, we will nevertheless seek to ensure that information transferred to such country is adequately protected.

Your Privacy Rights and Choices

You may stop the Wisdom Service from using your User Information at any time by (i) uninstalling the Facebook Application and setting your Facebook privacy settings to prevent the Wisdom Service from accessing your Facebook Information through your friends or (ii) deleting your Facebook account. Following your de-installation of the Wisdom Service or deletion of your Facebook account, certain of your information may still be preserved in a non-personally identifiable form as part of aggregate historical data reports used by the Company.

Subject to applicable law, we provide you with access to the User Information we have retained about you and the ability to review, correct, update, block or delete the information where it is inaccurate. Subject to applicable law, we may limit or deny access to your User Information where providing such access is unreasonably burdensome or expensive under the circumstances. Please submit your request to the address specified in the “How to Contact Us” section below.

Updates to This Privacy Policy

This Privacy Policy may be updated periodically and without prior notice to you to reflect changes in our information processing practices or for any other purpose. We will post a notice in the Info section of the Wisdom Service’s profile to notify you of any significant changes to the Privacy Policy and indicate there and at the top of the Privacy Policy when it was most recently updated.

How to Contact Us

If you have any questions or comments about this Privacy Policy, please contact us by email at support@wisdom.com or telephone at 703-744-6529. You also may write to us at MicroStrategy Enterprises, Inc., 1850 Towers Crescent Plaza, Vienna, Virginia 22182, Attn: Office of the General Counsel. Questions or comments submitted through other means, such as Wall posts, may not be received or addressed.

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Appendix I - Privacy Policy URLs

<https://www.Microstrategy.com/us/legal-folder/privacy-policy>

https://web.archive.org/web/*/https://www.Microstrategy.com/us/legal-folder/privacy-policy

<https://web.archive.org/web/20111007040233/http://wisdom.com/privacy-policy.html>

<https://web.archive.org/web/20110718070741/http://www.wisdom.com/privacy-policy.html>

<https://web.archive.org/web/20110718070741/http://www.wisdom.com/privacy-policy.html>

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Appendix J - Terms of Service URLs

<https://web.archive.org/web/20111007035755/http://wisdom.com/terms-of-use.html>

<https://web.archive.org/web/20150423011449/http://www.wisdom.com:80/personal/terms-of-use/>

<https://web.archive.org/web/20150423011449/http://www.wisdom.com:80/personal/terms-of-use/>

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Appendix K - Domain Registration Information URLs

[https://whois\[.\]domaintools\[.\]com/emma.com](https://whois[.]domaintools[.]com/emma.com)

<https://community.riskiq.com/search/wisdom.com>

<https://whois.domaintools.com/usherevents.com>

<https://whois.domaintools.com/Microstrategy.com>

[https://research\[.\]domaintools\[.\]com/iris/investigations/234796/search/05ab8403-5abf-4b77-b589-0ed7da28799c/51f2b35c-40ce-4354-a2d8-0add0a7712be](https://research[.]domaintools[.]com/iris/investigations/234796/search/05ab8403-5abf-4b77-b589-0ed7da28799c/51f2b35c-40ce-4354-a2d8-0add0a7712be)

[https://research\[.\]domaintools\[.\]com/iris/investigations/234796/search/05ab8403-5abf-4b77-b589-0ed7da28799c/51f2b35c-40ce-4354-a2d8-0add0a7712be](https://research[.]domaintools[.]com/iris/investigations/234796/search/05ab8403-5abf-4b77-b589-0ed7da28799c/51f2b35c-40ce-4354-a2d8-0add0a7712be)

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Appendix L - Developer Email Addresses

emeirshow@163.com

Redacted - PII

stupidb0648@sina.com

Redacted - PII

Redacted - PII

Redacted - PII

hungle@live.com

support@wisdom.com

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Appendix M – “Scholars Have Data on millions of Facebook Users. Who’s Guarding It?”

The New York Times

May 6, 2018 Sunday 13:24 EST

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Section: TECHNOLOGY

Length: 1702 words

Byline: Sheera Frenkel

Highlight: Academics have scoured Facebook pages in the name of science. But the troves they’ve amassed are sometimes unsecured and now pose a privacy risk.

SAN FRANCISCO — In July 2014, a team of four Swedish and Polish researchers began using an automated program to better understand what people posted on Facebook.

The program, known as a “scraper,” let the researchers log every comment and interaction from 160 public Facebook pages for nearly two years. By May 2016, they had amassed enough information to track how 368 million Facebook members behaved on the social network. It is one of the largest known sets of user data ever assembled from Facebook.

“We’re concerned about how easy it was to collect this,” said Fredrik Erlandsson, one of the researchers and a lecturer at the Blekinge Institute of Technology in Sweden. Last December, he and his colleagues published a research paper in the journal Entropy detailing how their methods of trawling social media sites could be replicated.

For more than a decade, professors, doctoral candidates and researchers from academic institutions around the world have harvested information from Facebook using techniques similar to those of Dr. Erlandsson and his team. They have compiled hundreds of Facebook data sets that captured the behavior of a few thousand to hundreds of millions of individuals, according to interviews with more than a dozen scholars.

Their practices came to light in March when The New York Times and The Observer of London reported that Aleksandr Kogan, a University of Cambridge psychology professor, had obtained the data of up to 87 million Facebook users through a quiz app. Mr. Kogan sold the information to Cambridge Analytica, a political consulting firm with ties to the Trump campaign, so it could build psychographic profiles of American voters. Last week, Cambridge Analytica said it would cease operations after the uproar over its use of personal information.

But while what happened with Mr. Kogan’s Facebook data set is now known, the fate of other information hoards is murkier. In many cases, the data was used for research or scholarly articles. The information was then sometimes left unsecured and stored on open servers that offered access to anyone. Some academics said the data could have been easily copied and sold to marketers or political consulting firms.

The potential result is more leakage of Facebook users’ information through academic circles, said Rasmus Kleis Nielsen, a professor of political communication at the University of Oxford who has studied data collection from Facebook.

“The academic world is highly decentralized, and each individual, each institution, has a different way of securing their data,” Dr. Nielsen said. “Even if almost everyone in the academic community is careful and protects the data, you still can end up in a situation where someone is careless or acts in bad faith and sells access. It’s hard to imagine how Facebook stops that from happening.”

The Times reviewed half a dozen Facebook data sets compiled by academics from 2006 to 2017. One, gathered from 2015 to 2017 by researchers in Denmark and New Zealand, examined 1.3 million people in Denmark — about a

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quarter of the country's population — to determine how liking one political page on Facebook could predict how someone would vote in the future. Another set, from 2013, by a group of Norwegian academics focused on the civic engagement of 21 million Facebook members on four continents.

The Danish research team did not respond to a request for comment. Petter Bac Brandtzaeg, one of the Norwegian researchers, said he understood concerns about data gathering.

“As a researcher you get immediate access to people's behavior, attitudes, feelings and relationships, which are of course tempting for all,” he wrote in an email. He said many researchers lacked the technical expertise to properly secure data.

The Facebook data was typically amassed through scraper programs that crawled the social network to document what was posted, or through quiz apps that requested access to people's profiles. The results included users' locations, interests, political affiliations, Facebook interactions and even music preferences.

In most cases, researchers assigned numbers to people whose Facebook information they had obtained to maintain anonymity. But the more data there is, the easier it is to overlay one information set with another to identify someone. One 2015 paper published in the journal Science looked at credit card spending data and found that data scientists could pinpoint 90 percent of the shoppers by name with just four random pieces of information from sites like Facebook, Instagram and Twitter.

Once people are identified and their interests and interactions known, they can be targeted with advertising and mobilized for political campaigns or other causes.

For years, Facebook had no specific policies about academics' access to user data, though it had guidelines on working with third parties. While the company has a rule that forbids the use of scrapers, it has not enforced that policy against scholars. And at times, it has assisted researchers with studies.

In 2014, though, Facebook began limiting third-party apps, like quizzes, from obtaining users' information.

Since Mr. Kogan's actions were revealed, fueling an outcry over data privacy, Facebook has made further changes. The company has given people more control over their privacy settings. It has said it will audit all apps that collected large amounts of Facebook data, and it temporarily stopped allowing new apps to gather information from its members.

Last month, Facebook also narrowed the number of academics it would work with, saying it would collaborate with those who wanted to research the impact of social media on elections through an “independent election research commission.” Only scholars with election-related projects can apply.

“We are taking a hard look at the information apps can use when you connect them to Facebook, as well as other data practices,” Susan Glick, a Facebook spokeswoman, said in a statement. “These other data practices include academic research.”

Before social media existed, researchers hoping to study human behavior had to painstakingly seek out groups of people to examine. Social media has let them easily find masses of subjects — as well as information like their date of birth, gender and interests — and observe some of their online behavior in real time.

“It was unprecedented,” said Christian Rudder, a founder of OkCupid, a dating and social media site, who published the book “Dataclysm” in 2014 on how much people revealed through their online lives.

One of the academic community's earliest known Facebook data sets was collected in 2006 by Harvard University professors. It covered 1,700 people who agreed to have their Facebook information anonymously analyzed. The data was later easily traced back by other academics to Harvard freshmen.

In Britain, researchers were doing similar work through different means. In 2007, Michal Kosinski, then deputy director at the Psychometrics Center at the University of Cambridge, worked with a colleague, David Stillwell, to create My Personality, a quiz app that offered to assess people's personalities in exchange for data about them. It was one of the first times a quiz app had been used for obtaining Facebook members' information.

My Personality has now collected details on more than six million Facebook users, according to the academics who have gathered the data. Many researchers have since copied the quiz app method, including Mr. Kogan.

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In interviews with The Times, Dr. Kosinski and Dr. Stillwell said they took great care to keep the data they procured anonymous. Dr. Stillwell added that the information had been widely shared with other researchers, but any academic who wished to use it was vetted.

Dr. Kosinski acknowledged that data is not a physical item that is easy to control. Once a data set is created, it can be copied and shared until its original source is unknown. He said collection of information from Facebook had become widespread over the years, not only by academics but also by developers, marketers, data analytics companies and others.

“What Kogan did was wrong. But what Kogan did, many others do on a much larger scale,” Dr. Kosinski said. “They just don’t get caught.”

In 2014, after Facebook announced it would restrict third-party apps from gaining access to user data, the reach of quiz apps became limited. But scrapers continued to improve and more speedily compile information from the social network.

A group of German academics used a scraper to harvest the profiles of 60,000 Facebook users in the New Orleans area starting in late 2008. The researchers, whose goal was to study how people’s friendships change online over time, recorded over 800,000 interactions during a two-year period. They did not respond to a request for comment.

Some scholars said Facebook’s recent privacy changes may have gone too far by also cutting off academics who behaved responsibly.

“Academics would argue that we need access to primary data,” said Dr. Nielsen of Oxford. He said the changes might lead to an asymmetry, with internal Facebook researchers accumulating mounds of data while outside academics would not.

“If that happens, only Facebook will really know very much about how Facebook actually operates and how people act on Facebook,” he said.

Dr. Erlandsson said the paper he and his colleagues published last December initially made little splash. But since the Cambridge Analytica revelations, he has seen renewed interest. He said he had been contacted by companies — he declined to name them — interested in buying the data on 368 million Facebook members.

“I’m not interested in selling,” he said. “And the truth is, anyone could easily do this themselves.”

Follow Sheera Frenkel on Twitter: @sheeraf.

PHOTO: In 2007, Michal Kosinski, then at the University of Cambridge, worked with colleagues on a quiz app that offered to assess people’s personalities in exchange for collecting their Facebook data. (PHOTOGRAPH BY An Rong Xu for The New York Times FOR THE NEW YORK TIMES)

Appendix N – List of Facebook apps associated with Microstrategy emails

Below is a table of 236 apps where the email of the individual listed as the app contact or alternate contact contains @microstrategy.com:

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
2068390253441115	10_11_allhands	2018-02-27	2	gpeng@microstrategy.com	
1575014645912184	Adam1	2018-01-12	2	atraskowski@microstrategy.com	atraskowski@microstrategy.com
1943031095945411	App for 1042	2017-05-22	2	ivillarruel@microstrategy.com	
1311479632270071	App1042	2017-05-22	1	ivillarruel@microstrategy.com	
149946782356055	AqueductTech	2018-02-25	1	gpeng@microstrategy.com	
613928738664206	ard-test	2013-10-22	0	hlee@microstrategy.com	hlee@microstrategy.com
389600851808975	AskMSTR	2019-01-10	2	pmagiera@microstrategy.com	
686652551484185	ATLPOC	2016-08-16	1	jalexander@microstrategy.com	
251932984946141	Audience Insight	2013-05-01	10	dyip@microstrategy.com	dyip@microstrategy.com

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
153770608134311	Audience Insight	2013-05-01	0	dyip@microstrategy.com	dyip@microstrategy.com
211476932579965	AVON	2016-06-22	0	eamaral@microstrategy.com	
741151642617790	Gartner109	2014-09-25	3	jinyang@microstrategy.com	
490627784406232	AWS_QE	2014-08-11	4	mhe@microstrategy.com	
1487682444835452	AWS_QE_CUST13	2014-09-18	5	jinyang@microstrategy.com	
1484625008486455	AWS_QEPROD12	2014-09-25	2	jinyang@microstrategy.com	
1486022634978616	AWS_QT	2014-08-26	2	mhe@microstrategy.com	
551623885007470	Blitz_PengGuiFang	2016-02-17	5	lyan@microstrategy.com	
557749244299627	Boris Test App	2013-11-18	0	bskliarski@microstrategy.com	bskliarski@microstrategy.com
49214527790	CatSpitBlog	2009-01-15	0	asmith@microstrategy.com	asmith@microstrategy.com
1707959809500702	ckfbapp	2017-06-13	2	ckelleher@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
174297386480688	CKFBImportApp	2017-10-10	1	ckelleher@microstrategy.com	
890147011050929	CKFBMSTRAPP	2015-06-24	2	ckelleher@microstrategy.com	
455054077922755	Client Insight	2013-05-01	3	dyip@microstrategy.com	dyip@microstrategy.com
410720855611196	CMS	2012-03-21	311	lomer@microstrategy.com	
344716428921832	CMSDemo	2012-04-23	456	lomer@microstrategy.com	
321173661275979	CMSProdM	2012-03-21	101	lomer@microstrategy.com	
269219916491217	CMSUAT2	2012-03-14	260	eabraham@microstrategy.com	
395031810545562	CMSUAT2	2012-07-30	1	dyoo@microstrategy.com	
100466783492615	Company Dash	2013-05-01	1	dyip@microstrategy.com	dyip@microstrategy.com
158084360974562	Concept	2012-02-02	1	grygula@microstrategy.com	grygula@microstrategy.com

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
249592601745324	DanAlertDevTest	2011-09-22	20	dwu@microstrategy.com	dwu@microstrategy.com
252928401503212	DashSeed	2012-11-28	0	lichen@microstrategy.com	lichen@microstrategy.com
293087267541899	Demo	2014-08-31	1	jinyang@microstrategy.com	
1380325048929616	DFW_Beta4_Test	2014-12-10	2	mkopelman@microstrategy.com	
640230016065621	DIEMMA Testing	2014-05-08	5	weizhou@microstrategy.com	weizhou@microstrategy.com
1871466109751719	DI-GIT-RDU	2016-12-20	2	rdu@microstrategy.com	
1473529616251813	DIQEOT	2014-09-02	2	lhernandez@microstrategy.com	
443171679159647	DIQEPOL Test A	2014-05-08	1	lhernandez@microstrategy.com	
571636062955050	Emma	2014-05-25	10	raj@microstrategy.com	support@usher.com
171057812950591	Emma Mom Sweepstakes	2011-05-11	2	npolt@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
195290970545824	Emma_Test	2011-10-31	3		mijiang@microstrategy.com
112723058848868	EmmaTestZhangBing	2012-01-10	5	bizhang@microstrategy.com	yali@microstrategy.com
176190879147231	EmmaXhanDebug	2012-01-18	0	yali@microstrategy.com	yali@microstrategy.com
163851686987330	EmmaYaliDebug	2010-11-22	7		yali@microstrategy.com
381546928630207	Enterprise Manager Ext Usage	2013-05-15	1	dyip@microstrategy.com	dyip@microstrategy.com
979633385382049	ESPN_MSTR10Beta5.2	2015-03-10	2	mkopelman@microstrategy.com	
261426593917703	EURO APP	2011-12-19	1	jsowa@microstrategy.com	jsowa@microstrategy.com
164467760306822	Express Videos	2011-10-03	0	webmaster@microstrategy.com	mycloud@microstrategy.com
192997237536780	First Android App	2013-07-26	0	blawton@microstrategy.com	blawton@microstrategy.com
1828882624006667	FunkyBuddha	2016-08-16	1	jalexander@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
160972914494548	Gartner109	2017-11-03	2	gpeng@microstrategy.com	
192399407454705	gegeTest2	2011-02-01	0	grygula@microstrategy.com	grygula@microstrategy.com
114272811996319	goooooogle	2011-06-24	0	yliao@microstrategy.com	yliao@microstrategy.com
1747663315522244	gpeng_ABA	2016-06-29	3	gpeng@microstrategy.com	
1805987929639123	gpeng_ABA_vs15	2016-10-28	4	gpeng@microstrategy.com	
1333000430061128	gpeng_debug	2016-07-18	5	gpeng@microstrategy.com	
479752675546379	gpeng_DebugEnv	2016-04-19	1	gpeng@microstrategy.com	
1907513706145942	gpeng_SDK	2017-02-23	1	gpeng@microstrategy.com	
1597787760540048	gpengDebugEnv	2016-04-08	6	gpeng@microstrategy.com	
374741082863254	gpengInsEnv	2016-11-23	3	gpeng@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
1156399827725389	gpengInsEnv	2016-05-17	3	gpeng@microstrategy.com	
224461707568937	gregfbapp	2011-05-13	12	grygula@microstrategy.com	grygula@microstrategy.com
1662278237420831	Grupo VIPS	2016-08-31	2	jdelgado@microstrategy.com	
130616267127608	grze	2013-04-12	0	grygula@microstrategy.com	grygula@microstrategy.com
114610202001265	GTraining	2012-02-22	1	grygula@microstrategy.com	grygula@microstrategy.com
153219775435786	hazheng-test	2017-12-04	2	gpeng@microstrategy.com	
518008158257042	HR Analytics	2013-05-01	0	dyip@microstrategy.com	dyip@microstrategy.com
134470270076464	HR Analytics	2013-05-01	1	dyip@microstrategy.com	dyip@microstrategy.com
1606391156342474	jpn-hseda_data_import	2016-06-05	2	hseda@microstrategy.com	
151314978608854	kai	2016-07-17	2	kzhao@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
641092709254217	KiteFly	2013-06-08	1	zxu@microstrategy.com	zxu@microstrategy.com
148076565250709	Lajkonik	2011-02-01	4	grygula@microstrategy.com	grygula@microstrategy.com
114542265297955	Lajkonik	2011-05-12	0	grygula@microstrategy.com	grygula@microstrategy.com
139476426115393	Lajkonik2	2011-02-09	1	grygula@microstrategy.com	grygula@microstrategy.com
100739506677826	lajkonik3	2011-03-21	1	grygula@microstrategy.com	grygula@microstrategy.com
357647177627501	Laputa Castle	2012-05-06	0	lichen@microstrategy.com	lichen@microstrategy.com
661763527251807	LeviathanWS app	2014-06-30	2	omarchal@microstrategy.com	
253595498675058	localhost	2018-10-09	1	gpeng@microstrategy.com	
498403700363613	localhost	2016-05-16	6	xilu@microstrategy.com	
203372497107718	localhost-new20180410	2018-04-10	2	gpeng@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
144285092288858	Lucian's Test	2010-11-28	2	lichen@microstrategy.com	lichen@microstrategy.com
671533942987742	LyanQC003WebApp	2016-01-08	3	lyan@microstrategy.com	
1011556798890581	LyanWebDevApp	2016-02-02	4	lyan@microstrategy.com	
1710792612491807	LyanWebQc003	2016-01-10	3	lyan@microstrategy.com	
1739269649625070	MAD	2016-05-04	1	eamaral@microstrategy.com	
501413576714431	MAD 2016 AVON	2016-05-10	2	eamaral@microstrategy.com	
496322257058487	Michael Saylor	2012-10-09	0	npolt@microstrategy.com	
531496830341600	MicroStrategy	2015-07-06	2	stunbridge@microstrategy.com	
330254460728970	MicroStrategy	2017-07-04	787	gpeng@microstrategy.com	
1802856843323691	MicroStrategy	2016-10-04	1	cturhan@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
1482810521931677	MicroStrategy	2014-04-18	31	stempleman@microstrategy.com	
1083665528396127	MicroStrategy	2016-10-04	1	cturhan@microstrategy.com	
721455991234875	MicroStrategy	2014-09-04	3	huali@microstrategy.com	
389155354616624	MicroStrategy	2015-06-24	8	koakley@microstrategy.com	
1105065599507283	MicroStrategy All Hands Test	2015-05-14	3	dsingh@microstrategy.com	
694503433925327	MicroStrategy Analytics	2014-04-16	1	howen@microstrategy.com	
103242659766686	MicroStrategy Analytics Express	2011-05-17	689	Redacted - PII	expressadmin@microstrategy.com
331596886885617	MicroStrategy Analytics Express	2012-02-05	1705	Redacted - PII	expressadmin@microstrategy.com
204348773057745	MicroStrategy Analytics Express	2013-07-24	196	expressadmin@microstrategy.com	Redacted - PII
150745411382	Microstrategy Argentina	2009-09-08	0	arg-info@microstrategy.com	arg-info@microstrategy.com
839928979350823	MicroStrategy Desktop	2014-08-27	2262	support@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
138683192847411	MicroStrategy Graph	2010-11-02	4	blawton@microstrategy.com	blawton@microstrategy.com
112960983001	MicroStrategy Jobs	2009-08-14	1	webmaster@microstrategy.com	webmaster@microstrategy.com
163744947001252	MicroStrategy Like Button	2010-12-06	0	webmaster@microstrategy.com	webmaster@microstrategy.com
1414407735488813	MicroStrategy Mobile	2014-04-15	6	howen@microstrategy.com	support@microstrategy.com
363378604088318	MicroStrategy Test App	2017-11-15	3	aaberra@microstrategy.com	
397621740618546	MicroStrategy tutorial	2017-04-12	1	tisullivan@microstrategy.com	
188891646372	MicroStrategy World 2010	2009-11-19	1	npolt@microstrategy.com	webmaster@microstrategy.com
138603709622064	MicroStrategy World 2013	2012-11-14	0	cbae@microstrategy.com	Redacted - PII
438879446191925	MicroStrategy World 2013	2012-11-15	0	cbae@microstrategy.com	cbae@microstrategy.com
214651072275600	MicroStrategyImportTest	2017-01-23	1	santonellis@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
261677234291577	MicrostrategyJoseph	2017-03-31	1	jmadrinkian@microstrategy.com	
1729713173726294	MicroStrategy-TestApp-1	2017-12-01	2	dhill@microstrategy.com	
150522278377093	Miles	2011-10-11	1	wmiles@microstrategy.com	wmiles@microstrategy.com
591397931027434	MIN102	2016-05-25	2	mzheng@microstrategy.com	
125610824217593	MJ_Emma	2011-11-29	6	mijiang@microstrategy.com	mijiang@microstrategy.com
288338447925336	MJ_EmmaInApache	2012-05-08	3	mijiang@microstrategy.com	mijiang@microstrategy.com
393062724083290	MJ_EmmaNewInApache	2012-06-29	3	mijiang@microstrategy.com	mijiang@microstrategy.com
330058450346295	MJ_Testing	2011-12-29	1	mijiang@microstrategy.com	mijiang@microstrategy.com
503613609719200	MMSGaming	2013-08-09	4	dyip@microstrategy.com	dyip@microstrategy.com
436318403077361	Mobile Moments Contest	2012-08-16	0	npolt@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
551156068234726	MobileMoney	2012-10-29	6	lichen@microstrategy.com	lichen@microstrategy.com
269196723529050	Moshpit	2017-04-06	1	tisullivan@microstrategy.com	
1269707676412081	MSTR	2017-05-24	1	idominici@microstrategy.com	
284800215314655	MSTR	2017-05-11	1	samliu@microstrategy.com	
1980128055606903	MSTR	2017-05-11	1	jalexander@microstrategy.com	
463724157427477	MSTR Chatbot	2018-07-26	2	fding@microstrategy.com	
531971110331645	MSTR Data Import	2016-06-19	2	kyap@microstrategy.com	
1616740921970280	MSTR Data Import	2016-06-19	1	kyap@microstrategy.com	
263867837325971	MSTR Data Import	2016-07-14	2	cmcgovern@microstrategy.com	
1768611186750715	MSTR Data Import	2016-06-19	1	kyap@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
642360165865704	MSTR Data Import	2015-06-17	2	hchadeisson@microstrategy.com	
938113222891493	MSTR Tutorial	2015-12-04	8	samliu@microstrategy.com	
1763985850525909	MSTR Web 1	2016-08-10	2	ivillarruel@microstrategy.com	
1643147275898494	MSTR West	2015-06-24	4	koakley@microstrategy.com	
1702680093321819	MSTR_MIN2	2016-05-24	2	mzheng@microstrategy.com	
218704301966408	MSTR_MV	2017-05-17	2	mverbanick@microstrategy.com	
290181131313692	MSTR_P	2016-04-27	2	mzheng@microstrategy.com	
794798383990721	MSTR_Test	2016-05-12	1	tisobe@microstrategy.com	
274306916246440	MSTR_Toshifumi.Isobe	2016-05-12	1	tisobe@microstrategy.com	
656376214536368	MSTR10_5	2016-11-17	1	jalexander@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
177274496133272	MSTR10xDEMO	2017-05-17	2	butrecht@microstrategy.com	
1945525562144705	MSTRChatBot	2018-07-26	2	vpydah@microstrategy.com	
468045059965060	MstrConnectorTest	2014-07-10	3	vgarg@microstrategy.com	
189947801639126	MSTRDATA	2018-04-17	1	butrecht@microstrategy.com	
1174766759253734	MSTRDataImp	2016-07-19	2	ylacerda@microstrategy.com	
116262932306055	MSTRDesktop	2017-06-14	2	mpepper@microstrategy.com	
112111992741457	mstrsocial_mv	2017-06-26	1	mverbanick@microstrategy.com	
232611563761622	MSTRTEST	2016-04-28	1	aiacangelo@microstrategy.com	
644005302417807	MSTR-TEST	2016-06-08	1	tisobe@microstrategy.com	
808181312557998	multi_tenant_beta4	2014-12-16	15	jinyang@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
178010458887080	Murat_Test	2010-12-24	1	mcetin@microstrategy.com	mcetin@microstrategy.com
159268614159814	murat_test	2011-09-22	1	mcetin@microstrategy.com	mcetin@microstrategy.com
197625146952299	my_test	2011-06-24	0	mcetin@microstrategy.com	mcetin@microstrategy.com
151881371531302	myChat	2010-12-28	1	xiliu@microstrategy.com	xiliu@microstrategy.com
209907985714846	MyLocalAlert	2011-06-08	0	grygula@microstrategy.com	grygula@microstrategy.com
380330335433741	Mytest	2013-10-30	0	yali@microstrategy.com	yali@microstrategy.com
1818096718515681	NewFeedfor10	2017-02-27	1	eokerholm@microstrategy.com	
173167032799413	NewTrainingApp	2012-02-24	2	grygula@microstrategy.com	grygula@microstrategy.com
215714385198286	No5	2012-04-30	497	yliao@microstrategy.com	yliao@microstrategy.com
363647893658035	Offlineaccesstesting	2012-03-12	502	yliao@microstrategy.com	yliao@microstrategy.com

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
344054355760851	OneTier_DEV	2014-08-14	4	wzhu@microstrategy.com	
268287643202160	Pablo	2011-09-23	0	psegura@microstrategy.com	psegura@microstrategy.com
393597944055351	Page_DEV	2012-12-20	113	dkaruppiah@microstrategy.com	dkaruppiah@microstrategy.com
483523888360214	Page_UAT	2012-12-19	504	dkaruppiah@microstrategy.com	dkaruppiah@microstrategy.com
574871412542308	PeoplePickerDemo	2013-02-03	7	lichen@microstrategy.com	lichen@microstrategy.com
758299460900299	performance-ea	2014-08-22	2	yuchen@microstrategy.com	
104336163008887	Pete New Test App	2011-09-24	0	pdidomenico@microstrategy.com	pdidomenico@microstrategy.com
102631016515638	PlayingWithAPI	2011-10-17	2	aromanski@microstrategy.com	aromanski@microstrategy.com
807812422613396	PRODBETA3	2014-11-07	3	jinyang@microstrategy.com	
604469492998690	PRODBETA31114	2014-11-13	5	jinyang@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
208390149204210	RLTestApp	2011-06-20	53	yliao@microstrategy.com	yliao@microstrategy.com
380554492318619	royu	2017-02-24	1	royu@microstrategy.com	
1794570987440426	royu	2016-05-18	2	royu@microstrategy.com	
265788680431040	RPechter MicroStrategy Web	2016-04-29	2	rpechter@microstrategy.com	
1391216907781242	Sales Portal For iPad	2013-10-11	0	dyip@microstrategy.com	dyip@microstrategy.com
583258785065527	Sales Portal iPad	2013-10-11	3	dyip@microstrategy.com	dyip@microstrategy.com
975753975778409	selfproBeta5Test	2015-02-06	1	mhe@microstrategy.com	
191659124190812	share app	2011-02-17	1	webmaster@microstrategy.com	webmaster@microstrategy.com
293004204086247	StandAlonePage	2012-02-06	0	grygula@microstrategy.com	grygula@microstrategy.com
544207658955088	StarbellyDev	2013-04-29	22	mbrown@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
1744071102273515	Steelcase Moshpit	2017-04-06	2	tisullivan@microstrategy.com	
472687776248076	Tech CAT 10.2	2015-11-19	1	cuzhang@microstrategy.com	
1688999391351475	test	2016-04-27	2	dazhao@microstrategy.com	
108292219245093	test	2011-02-01	0	grygula@microstrategy.com	grygula@microstrategy.com
203984179612039	test	2011-02-25	0	grygula@microstrategy.com	grygula@microstrategy.com
106060209472268	test	2011-02-01	0	grygula@microstrategy.com	grygula@microstrategy.com
129565147155229	Test	2011-12-08	0	cjungen@microstrategy.com	cjungen@microstrategy.com
257025697668963	Test App	2011-09-26	0	klein@microstrategy.com	klein@microstrategy.com
124843171432859	Test Voda	2017-06-14	2	mpepper@microstrategy.com	
1306372646125815	TestApp	2017-05-22	2	ivillarruel@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
216347035126848	Testing	2012-01-26	1	emajchrzak@microstrategy.com	emajchrzak@microstrategy.com
415179055224325	TestingAd	2013-01-21	0	cbae@microstrategy.com	cbae@microstrategy.com
147286048657315	TestingHandlers	2010-12-13	0	aromanski@microstrategy.com	aromanski@microstrategy.com
1487033158207506	TestonAMI	2014-08-06	7	mhe@microstrategy.com	
462634760440416	TestOpenGraph	2012-12-17	1	fxia@microstrategy.com	fxia@microstrategy.com
282969941763420	TestTrainig	2012-01-24	2	grygula@microstrategy.com	grygula@microstrategy.com
298581473549728	TestUser	2012-04-27	501	yliao@microstrategy.com	yliao@microstrategy.com
847396948624090	TestYcaoLX	2014-10-27	1	ycao@microstrategy.com	
175466036270310	Tetst	2017-01-27	1	pdeguine@microstrategy.com	
378120362230009	The Mobile Wave	2012-05-01	43	npolt@microstrategy.com	webmaster@microstrategy.com

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
296726373752262	Tilly's	2012-05-21	0	rgardner@microstrategy.com	Redacted - PII
1616852211966022	tisullivan MSTY	2016-05-27	1	tisullivan@microstrategy.com	
284659145214619	tisullivan MSTY	2016-05-27	1	tisullivan@microstrategy.com	
1181499951862064	tisullivan MSTY	2016-05-27	1	tisullivan@microstrategy.com	
348071025228731	TokenToken	2012-03-28	500	yliao@microstrategy.com	yliao@microstrategy.com
882431961876697	TOOLSCAT102	2015-11-18	2	cuzhang@microstrategy.com	
302121196516582	Training	2012-02-24	2	grygula@microstrategy.com	grygula@microstrategy.com
897654953703315	Tree Moshpit	2016-10-03	2	scrabtree@microstrategy.com	
361648343883625	TryHeroku	2012-04-27	502	yliao@microstrategy.com	yliao@microstrategy.com
1653200058337969	Usher	2016-06-28	1	ryu@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
465704873552356	Usher	2014-02-12	163	sziraknejad@microstrategy.com	support@usher.com
378283412255766	Usher Manager	2012-11-07	24	qzhao@microstrategy.com	lichen@microstrategy.com
179346458757646	Usher Network - Yan	2010-12-07	34	yali@microstrategy.com	yali@microstrategy.com
226298250760037	Usher welcome tab	2011-09-28	0	npolt@microstrategy.com	
377212199367722	vapp_zyao	2017-12-04	2	zyao@microstrategy.com	
113036349047789	VIPS	2015-08-24	0	jdelgado@microstrategy.com	
1989972841018263	Web	2018-01-12	1	atraskowski@microstrategy.com	
244350085655367	Wisdom by MicroStrategy	2012-03-06	30	pdidomenico@microstrategy.com	pdidomenico@microstrategy.com
135098573332625	Wisdom Professional	2013-02-28	464	webmaster@microstrategy.com	Redacted - PII
186800148121351	Wisdom Professional	2012-09-11	204	npolt@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
147657722078461	Wisdom_DEV	2013-04-10	1	dkaruppiah@microstrategy.com	dkaruppiah@microstrategy.com
247964855304731	WisdomGardener	2012-05-30	2	grygula@microstrategy.com	grygula@microstrategy.com
260574274036547	WisdomPlayGround	2012-04-05	2	grygula@microstrategy.com	grygula@microstrategy.com
1812279955698043	WorkStationDI	2016-12-25	2	rdu@microstrategy.com	
426162180728151	Wyrzygani	2012-05-02	2	aromanski@microstrategy.com	aromanski@microstrategy.com
768906626539377	XCHEN-CONNECT	2014-12-02	2	xchen@microstrategy.com	
1037715819608642	XiluDWTest	2016-03-07	2	xilu@microstrategy.com	
115946055179335	Yep	2011-09-30	0	jcolaco@microstrategy.com	jcolaco@microstrategy.com
1637056066615550	YokimMSTR	2016-06-01	1	yokim@microstrategy.com	
1627043527352172	yumao_test	2017-12-04	2	yumao@microstrategy.com	

App ID	Name	Creation date	Authenticated users	Contact email	Alternative email
1655610948006192	zlu onetier	2015-06-19	2	zlu@microstrategy.com	
837014173105730	zxie_APP1	2016-12-15	2	zxie@microstrategy.com	
188858414503242		2011-07-11	0	grygula@microstrategy.com	grygula@microstrategy.com
241230395899789		2011-07-27	0	grygula@microstrategy.com	grygula@microstrategy.com
141148042630165		2011-06-30	0	grygula@microstrategy.com	grygula@microstrategy.com

Appendix O – App Earliest API Version and Priority

App Name	App Earliest API Version	App Priority
Alert	1	P1
LoicFBApp	1	P2
Usher for Managing Events	1	P0
Wisdom	1	P1
Wisdom - Internal Test App	1	P2
Emma, the Friendly Marketplace	1	P2